

EXHIBIT 16

Page 1

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

THE AUTHORS GUILD, INC.,)
ASSOCIATIONAL PLAINTIFF,)
BETTY MILES, JOSEPH)
GOULDEN, AND JIM BOUTON,)
INDIVIDUALLY AND ON)
BEHALF OF ALL OTHERS)
SIMILARLY SITUATED,) C.A. 05 CV 8136-DC
Plaintiffs) Volume: I
vs.)
GOOGLE, INC.)
Defendant)

DEPOSITION OF EXPERT WITNESS, BENJAMIN G. EDELMAN,
before Avis P. Barber, a Notary Public and Registered
Professional Reporter, in and for the Commonwealth
of Massachusetts, at the Harvard Business School,
Baker Library, 25 Harvard Way, Boston, Massachusetts,
on Thursday, June 14, 2012, commencing at 10:03 a.m.

Job No. 148413
PAGES 1 - 312

Page 3

1 INDEX
2
3 WITNESS DIRECT CROSS REDIRECT RECROSS
4 BENJAMIN G. EDELMAN
5 BY MR. GRATZ 6

7 EXHIBITS
8
9 NUMBER PAGE
10 Exhibit 1 Expert Report of Benjamin Edelman 17
11 Exhibit 2 Whenu.com Emergency Motion 98
12 Exhibit 3 Initial Expert Report of Doctor
Benjamin Edelman Concerning Industry
Practices and Activities of
13 Valueclick 101
14 Exhibit 4 Expert Report of Benjamin Edelman 112
15 Exhibit 5 Document entitled "Google Toolbar
Tracks Browsing even after User
Choose Disable" 129
16 Exhibit 6 Search Engine Land, Blog Post, 131
17 1/26/10
18 Exhibit 7 Document entitled "Privacy Lapse at
19 Google JotSpot" 137
20 Exhibit 8 Document entitled "Google's JotSpot
Exposes User Data" 139
21 Exhibit 9 Declaration of Benjamin Edelman 143
22 Exhibit 10 Supplemental Declaration of Benjamin
23 Edelman 143
24
25

Page 2

1 APPEARANCES:

2
3 On behalf of the Plaintiffs:
4 BONI & ZACK, LLC
5 15 St. Asaphs Road
6 Bala Cynwyd, Pennsylvania 19004
7 By: Michael J. Boni, Esquire
8 Tel: 610-822-0201
9 Fax: 610-822-0206
10 mboni@bonizack.com

11
12 On behalf of the Defendant
13 DURIE TANGRI
14 217 Leidesdorff Street
15 San Francisco, California 94111
16 By: Joseph C. Gratz, Esquire
17 Tel: 415-362-6666
18 Fax: 415-236-6300
19 jgratz@durietangri.com

20
21 ALSO PRESENT: Jody Urbati, Videographer
22
23
24
25

Page 4

1 EXHIBITS (Continued)
2 NO. PAGE
3
4 Exhibit 11 Document entitled "The Online
Economy: Strategy and
5 Entrepreneurship" 156
6 Exhibit 12 Declaration of Benjamin G. Edelman 161
7 Exhibit 13 Document entitled "Advertisers Using
WhenU" 164
8
9 Exhibit 14 Exhibit 1 171
10 Exhibit 15 Document entitled "Google Books
Partner Program Standard Terms and
11 Conditions" 213
12 Exhibit 16 Search Inside, Publisher Sign-Up 221
13 Exhibit 17 Participating Authors' Reprint
Agreement v2.0 228
14 Exhibit 18 Cooperative Agreement 267
15 Exhibit 19 Document entitled "NDA Never Existed" 270
16 Exhibit 20 Benjamin Edelman's Thesis 306
17
18
19 EXHIBITS RETAINED BY THE COURT REPORTER
20
21
22
23
24
25

1 (Pages 1 to 4)

<p style="text-align: right;">Page 5</p> <p>1 PROCEEDINGS</p> <p>2 THE VIDEOGRAPHER: Good morning. We</p> <p>3 are on the record at 10:03 A.M. on June 14th,</p> <p>4 2012. This is the videotaped deposition of</p> <p>5 Benjamin Edelman. My name is Jody Urbati, here</p> <p>6 with our court reporter Barbara Avis. We are</p> <p>7 here from Veritext National Deposition and</p> <p>8 Litigation Services at the request of counsel.</p> <p>9 This deposition is being held at</p> <p>10 Harvard Business School in the city of Boston,</p> <p>11 Massachusetts. The caption of this case is the</p> <p>12 Authors Guild versus Google, Inc. Please note</p> <p>13 that the audio and video recording will take</p> <p>14 place unless all parties agree to go off the</p> <p>15 record. Microphones are sensitive and may pick</p> <p>16 up whispers, private conversations and cellular</p> <p>17 interference.</p> <p>18 At this time will counsel and all</p> <p>19 present identify themselves for the record.</p> <p>20 MR. GRATZ: Joseph Gratz from Durie</p> <p>21 Tangri, LLP in San Francisco for defendant</p> <p>22 Google.</p> <p>23 MR. BONI: Michael Boni from Boni &</p> <p>24 Zach, Bala Cynwyd, Pennsylvania for plaintiffs.</p> <p>25 THE WITNESS: Benjamin --</p>	<p style="text-align: right;">Page 7</p> <p>1 Q. You have an undergraduate degree and</p> <p>2 a Ph.D. in economics; is that right?</p> <p>3 A. Yes.</p> <p>4 Q. Do any of the opinions stated in your</p> <p>5 report apply economic analysis?</p> <p>6 A. I think they do broadly understood,</p> <p>7 yes.</p> <p>8 Q. How so?</p> <p>9 A. The report considers the incentives</p> <p>10 of various parties, the factors motivating them</p> <p>11 to act or not to act and the likely consequences</p> <p>12 of those incentives.</p> <p>13 Q. Are there any specific economic</p> <p>14 methods that are applied in your report?</p> <p>15 MR. BONI: Object to form.</p> <p>16 A. I'm not sure I understand what you</p> <p>17 mean.</p> <p>18 Q. What economic methods are applied in</p> <p>19 your report?</p> <p>20 MR. BONI: Same objection.</p> <p>21 A. My training and economics teaches me</p> <p>22 to understand and analyze incentives in</p> <p>23 considering the actions of any rational actor.</p> <p>24 That method of analysis of considering and</p> <p>25 applying incentives is applied throughout the</p>
<p style="text-align: right;">Page 6</p> <p>1 MR. BONI: I'm sorry, and here</p> <p>2 representing the witness.</p> <p>3 THE VIDEOGRAPHER: Thank you. The</p> <p>4 witness will be sworn in and we can proceed.</p> <p>5 BENJAMIN G. EDELMAN,</p> <p>6 A witness called for examination, having been</p> <p>7 duly sworn, testified as follows:</p> <p>8 DIRECT EXAMINATION</p> <p>9 BY MR. GRATZ:</p> <p>10 Q. Good morning.</p> <p>11 A. Good morning.</p> <p>12 Q. Could you state your name for the</p> <p>13 record, please.</p> <p>14 A. Benjamin Edelman.</p> <p>15 Q. And you're an assistant professor at</p> <p>16 Harvard Business School; is that right?</p> <p>17 A. Yes.</p> <p>18 Q. Do you have tenure?</p> <p>19 A. No.</p> <p>20 Q. You have a number of degrees from</p> <p>21 Harvard; is that right?</p> <p>22 A. Yes.</p> <p>23 Q. Are any of those degrees in computer</p> <p>24 science?</p> <p>25 A. No.</p>	<p style="text-align: right;">Page 8</p> <p>1 report.</p> <p>2 Q. Can you tell me more about that</p> <p>3 method?</p> <p>4 MR. BONI: Objection to form.</p> <p>5 A. Well, you know I think it's pretty</p> <p>6 intuitive. It can be structured in a formal</p> <p>7 algebraic model when a particular situation</p> <p>8 calls for that approach. It can be studied</p> <p>9 empirically through large sample or small sample</p> <p>10 data when the context calls for that approach.</p> <p>11 It can also inform understanding and analysis</p> <p>12 without specific application of modeling or of</p> <p>13 large sample data analysis.</p> <p>14 Q. Did you apply any algebraic modeling</p> <p>15 in preparing your report?</p> <p>16 A. No.</p> <p>17 Q. Did you apply any empirical large</p> <p>18 sample data analysis in preparing your report?</p> <p>19 A. I wouldn't call it large sample data</p> <p>20 analysis. There are sections that draw on</p> <p>21 specific examples considered individually which</p> <p>22 probably is a better example of small sample</p> <p>23 data analysis.</p> <p>24 Q. And those are the particular</p> <p>25 anecdotes that you set forth in your report?</p>

Page 9

MR. BONI: Object to form.

A. The particular examples that are detailed in my report, yes.

Q. And do you extrapolate from those examples to reach conclusions that are more general?

A. I interpret those examples in order to reach conclusions that are more general, yes.

Q. By what means do you interpret those examples to reach more general conclusions?

A. I'm thinking in particular of a section of my report about defects in other Google offerings and the security and design thereof. And I examine a series of such defects and conclude that defects are possible, indeed even likely, even for products coming from a company as esteemed and trusted as Google. So an argument from analogy, I suppose it's an existence proof. If one exists, then others could also exist. Straightforward, logical reasoning to my eye.

Q. And the proposition that if one exists than others could also exist is an application of your training in economics?

MR. BONI: Object to form.

Page 10

A. You know, I think it's a principle that comes from multiple disciplines, training and mathematics, statistics, economics, logic, all the areas in which I have some training. And all of which speak to the same underlying logical principle which I don't think really requires all that much specialized training.

Q. And that principle is that the existence of one example suggests that such an example is, at least, not impossible and there might be others.

A. Precisely. If one thought there were no needles in a haystack, finding the first needle suggests there might be more.

Q. It doesn't make it certain that there are any others; is that right?

A. That's right.

Q. And the only thing it tells you about the probability of there being others is that -- strike that.

The only thing it tells you about the probability of there being any needles in the haystack -- strike that.

The only thing it tells you is about the existence of any needles in the haystack,

Page 11

not whether there are necessarily other needles in the haystack; is that right?

A. I'm not sure. Looking at the specific examples can be quite informative and understanding the kinds of problems that occur, the frequency with which they occur, the probability with which they occur.

Q. How can you determine a probability by looking at a single example?

MR. BONI: Object to form. Mischaracterizes the testimony.

A. At first you can draw inferences about a probability from a single example. If we saw that it rained on one out of five days, we could draw inferences about the probability of rain, even if those were the only five days in which we had ever experienced a particular city. We could say the probability of rain probably isn't 90 percent and probably isn't one one-thousandth of a percent. It's probably something closer to 20 percent, and of course with more data points you could draw a better inference.

Q. And those are the types of inferences that you draw in your report?

Page 12

A. That method of analysis consistent with my training and my research and my background informs the conclusions drawn in my report.

Q. That if something happens with a certain frequency, it's likely to happen with that frequency in the future?

A. I wouldn't have put it quite as simply as that, but that looking at the past can inform inferences about the future. That much, absolutely.

Q. Does that require economic analysis?

A. I think economic analysis is quite useful, particularly in understanding the incentives that make it more or less likely that a given problem will or won't occur.

Q. Does the existence of the issue in the first place inform you about what the incentive structure is?

MR. BONI: Object to form.

A. Sometimes it does. Sometimes seeing a specific example helps crystalize understanding of the problem. Ah, I see because of this problem, well, that resulted because of this incentive, and so the specific example

3 (Pages 9 to 12)

<p style="text-align: right;">Page 13</p> <p>1 really can help inform understanding.</p> <p>2 Q. Can you give me an understanding of</p> <p>3 such an instance?</p> <p>4 A. Sure.</p> <p>5 Q. Please go ahead and do so.</p> <p>6 A. In January 2010 I uncovered the</p> <p>7 Google Toolbar continuing to track user</p> <p>8 behavior, what web pages users viewed even after</p> <p>9 users had specifically disabled the toolbar,</p> <p>10 even after the toolbar had confirmed that it was</p> <p>11 disabled and even after the toolbar had</p> <p>12 disappeared from view, seemingly further</p> <p>13 confirming that it had ceased operation, but, in</p> <p>14 fact, it continued operation. It continued to</p> <p>15 track users' most sensitive online activities.</p> <p>16 That example helped me understand</p> <p>17 Google's incentive to collect the data at issue,</p> <p>18 users browsing. Namely, it was always in</p> <p>19 Google's interests to collect more data, the</p> <p>20 more data the better for reasons that Google</p> <p>21 well knows.</p> <p>22 Users, meanwhile, were most concerned</p> <p>23 about the appearance of their data being</p> <p>24 collected. What bugged users wasn't the actual</p> <p>25 collection but the knowledge that the data was</p>	<p style="text-align: right;">Page 15</p> <p>1 Had it failed to collect any data</p> <p>2 someone at Google would have noticed that in a</p> <p>3 hurry; whereas, when it collected too much, that</p> <p>4 was something that the Google engineers were</p> <p>5 much less likely to notice.</p> <p>6 Q. Your master's degree is in</p> <p>7 statistics; is that right?</p> <p>8 A. Yes.</p> <p>9 Q. Do any of the opinions stated in your</p> <p>10 report apply statistical methods?</p> <p>11 A. As in our prior discussion, I think</p> <p>12 the report is grounded in the approach of</p> <p>13 statistics, in the analytical structure of</p> <p>14 statistics, but doesn't apply the formal methods</p> <p>15 of statistics; for example, the algebraic method</p> <p>16 of statistics.</p> <p>17 Q. What methods of statistics does your</p> <p>18 report apply?</p> <p>19 A. Hereto drawing on information from a</p> <p>20 sample, history, in order to make inferences</p> <p>21 about a larger population, that is, the future.</p> <p>22 That's the essence of statistical inference, and</p> <p>23 that's something that my report does repeatedly.</p> <p>24 Q. Does your report draw on any</p> <p>25 statistical methods that are different from the</p>
<p style="text-align: right;">Page 14</p> <p>1 being collected. Users really had no way to</p> <p>2 tell one way or the other whether or not the</p> <p>3 data was being collected. All they could tell</p> <p>4 was whether they thought the data was being</p> <p>5 collected.</p> <p>6 So the understanding of the</p> <p>7 incentives on both ends helped me understand the</p> <p>8 cause of this problem, how it came to be that</p> <p>9 Google allowed this defect to occur in quite a</p> <p>10 widely used product and how it came to be that</p> <p>11 users had failed to notice this defect, even</p> <p>12 when it had been extant for several months at</p> <p>13 that point.</p> <p>14 Q. This led you to the conclusion that</p> <p>15 Google had an incentive to cause its software to</p> <p>16 operate in that manner?</p> <p>17 A. At the very least, Google had little</p> <p>18 incentive to check for this defect or to prevent</p> <p>19 this defect. One could consider the opposite</p> <p>20 defect. Suppose the toolbar had failed to</p> <p>21 collect any of the data that Google wanted to</p> <p>22 collect. Would anyone have noticed that?</p> <p>23 Absolutely. Because the whole purpose of this</p> <p>24 data collection system was, in fact, to collect</p> <p>25 data.</p>	<p style="text-align: right;">Page 16</p> <p>1 economic methods we've already discussed?</p> <p>2 A. I don't always draw a crisp</p> <p>3 distinction between statistical methods and</p> <p>4 economic methods, but I think we've discussed</p> <p>5 the relevant methods of both of those</p> <p>6 disciplines.</p> <p>7 Q. You have a law degree as well; is</p> <p>8 that right?</p> <p>9 A. Yes.</p> <p>10 Q. Do you express any legal opinions in</p> <p>11 your report?</p> <p>12 A. No.</p> <p>13 Q. In your course work, did you take any</p> <p>14 courses dedicated to how to secure networked</p> <p>15 computers from intrusion?</p> <p>16 A. I did not take any such courses as a</p> <p>17 student.</p> <p>18 Q. Are you familiar with the</p> <p>19 certification known as Certified Information</p> <p>20 Systems Security Professional or CISSP?</p> <p>21 A. Yes.</p> <p>22 Q. What is it?</p> <p>23 A. It's a certification consistent with</p> <p>24 the name, purporting to certify the skills and</p> <p>25 background of a certified person in the area of</p>

<p style="text-align: right;">Page 17</p> <p>1 information security.</p> <p>2 Q. Are you certified as a CISSP?</p> <p>3 A. No.</p> <p>4 Q. Do you hold any other certifications</p> <p>5 related to information security?</p> <p>6 A. Nothing comes to mind.</p> <p>7 MR. GRATZ: I'd like to mark as</p> <p>8 Edelman Exhibit 1, this document.</p> <p>9 (Report marked as Exhibit No. 1 for</p> <p>10 identification.)</p> <p>11 Q. Do you recognize this document,</p> <p>12 Mr. Edelman?</p> <p>13 A. Yes.</p> <p>14 Q. What is it?</p> <p>15 A. It's my expert report on this matter.</p> <p>16 Q. Turning your attention to</p> <p>17 Paragraph 1, you say, "My research focuses on</p> <p>18 the design of electronic marketplaces, including</p> <p>19 Internet advertising, search engines, privacy</p> <p>20 and information security. Do you see that?</p> <p>21 A. Yes.</p> <p>22 Q. Turning first to advertising, what</p> <p>23 Internet advertising systems have you done</p> <p>24 research on?</p> <p>25 A. I've written about a variety of</p>	<p style="text-align: right;">Page 19</p> <p>1 them to be labeled in a way different from the</p> <p>2 way they are labeled. Whether consumers can</p> <p>3 distinguish between advertising content and</p> <p>4 non-advertising content.</p> <p>5 Q. Did your research into advertising</p> <p>6 relate to information security as it relates to</p> <p>7 those marketplaces?</p> <p>8 A. In some instances, yes.</p> <p>9 Q. What instances are those?</p> <p>10 A. My understanding of information</p> <p>11 security in the context of advertising would</p> <p>12 certainly need to include whether an advertiser</p> <p>13 charged the right amount, whether their ads are</p> <p>14 placed in the correct places, whether they are</p> <p>15 given truthful information about where and how</p> <p>16 their ads performed. And I've written about all</p> <p>17 of those questions, including defects and</p> <p>18 shortfalls in those areas.</p> <p>19 Q. Have you ever written about</p> <p>20 intrusions into advertising systems by hackers?</p> <p>21 A. I have.</p> <p>22 Q. In what instances?</p> <p>23 A. I've written about a series of</p> <p>24 hackers, fraudsters of multiple sorts who have</p> <p>25 taken money from advertisers, money that they</p>
<p style="text-align: right;">Page 18</p> <p>1 Internet advertising systems, including search</p> <p>2 engines and their paper click advertising</p> <p>3 platforms, display advertising systems, and</p> <p>4 display advertising exchanges, affiliate</p> <p>5 marketing, listing services, for example, real</p> <p>6 estate listings, apartment rentals. There</p> <p>7 probably are some more online advertising that</p> <p>8 permeates my writing of the last decade.</p> <p>9 Q. What aspects of Internet advertising</p> <p>10 systems did you research?</p> <p>11 MR. BONI: Object to form. You can</p> <p>12 answer.</p> <p>13 A. My best known academic article</p> <p>14 explores the game theory of online advertising</p> <p>15 and search engines, how much to bid, assuming</p> <p>16 that the rules are structured in a particular</p> <p>17 way. I've written about fraud in advertising</p> <p>18 marketplaces, whereby advertisers are</p> <p>19 overcharged. I've written about fraud, whereby</p> <p>20 consumers are deceived, where an advertisement</p> <p>21 offers something other than what it purports to</p> <p>22 offer.</p> <p>23 I've written about advertisement</p> <p>24 labeling, whether advertisements are labeled as</p> <p>25 such, whether applicable legal doctrines require</p>	<p style="text-align: right;">Page 20</p> <p>1 were not entitled to according to any applicable</p> <p>2 contract. I've written about the methods</p> <p>3 whereby they did so, the computer code that</p> <p>4 allowed them to take the money, and the methods</p> <p>5 that I used in order to catch them, the proposed</p> <p>6 remediation of this problem, both in the short</p> <p>7 run, how to get the money back, and in the long</p> <p>8 run, how to make sure that it doesn't reoccur in</p> <p>9 the future.</p> <p>10 Q. The code that you spoke of in your</p> <p>11 previous answer, did it result in intrusion into</p> <p>12 any computer systems?</p> <p>13 A. Yes.</p> <p>14 Q. What computer systems are those?</p> <p>15 A. The advertising tracking systems of</p> <p>16 the victims of the respective frauds.</p> <p>17 Q. And how were those systems intruded</p> <p>18 upon?</p> <p>19 A. Well, it varies from example to</p> <p>20 example. In one example that I'm -- that I'm</p> <p>21 thinking of the intruder caused other people's</p> <p>22 computers to connect to the victim's computer in</p> <p>23 a way that caused false records to be created as</p> <p>24 to the supposed efficacy of an advertising</p> <p>25 system that, in fact, wasn't working at all, but</p>

5 (Pages 17 to 20)

Page 21

1 the intrusion caused records to indicate that
2 the system was working quite well and caused the
3 advertiser to pay actually in the millions of
4 dollars of unearned commission payments.

5 Q. Have they hacked into the tracking
6 system itself or merely caused other computers
7 to make false reports of ad impressions?

8 MR. BONI: Object to form.

9 A. I'm not sure I know what you mean by
10 the word "hacked" in that context.

11 Q. Had they gained access to the --
12 strike that.

13 In the instance you're discussing,
14 had the fraudsters gained access to confidential
15 information on the systems of the ad network,
16 and by that I mean stored on the servers
17 operated by the ad network?

18 A. In the example that I described, no
19 confidential information was involved one way or
20 the other.

21 Q. It was a situation in which the
22 fraudsters were causing third-party computers to
23 make false reports to that ad tracking system;
24 is that right?

25 A. That was one aspect of the problem.

Page 22

1 Q. What were the other aspects?

2 A. The fraudster was causing the ad
3 tracking system to believe that the
4 advertisements had been delivered and had caused
5 purchases to occur, when, in fact, neither of
6 those was the case.

7 Q. How did they achieve that?

8 MR. BONI: Object to form.

9 A. That was achieved by a set of
10 computer codes using multiple programming
11 languages, at least one server, multiple client
12 computers and the victim's server all operating
13 in concert in a way directed by the perpetrator
14 in order to cause the false records to be
15 created.

16 Q. Did the fraudsters have control of
17 the ad networks server?

18 A. I don't know what you mean by
19 "control" in this circumstance.

20 Q. Did the fraudsters gain information
21 from the ad networks server?

22 A. I don't think the fraudsters wanted
23 information so much as millions of dollars which
24 they did gain successfully.

25 Q. Was this a Botnet?

Page 23

1 A. No.

2 Q. Were the fraudsters operating a
3 server?

4 A. Yes.

5 Q. And that server communicated with
6 third-party computers?

7 A. Yes.

8 Q. And the communication between the
9 third-party computers and the server caused
10 those third-party computers to make reports to
11 the ad network; is that right?

12 A. Yes.

13 Q. And that was the method by which the
14 fraud was achieved; is that right?

15 A. That's the essence of it.

16 Q. And it was because those false
17 reports were made that the fraudsters were able
18 to make millions of dollars; is that right?

19 A. That was one of the necessary steps,
20 multiple lines of causation, of course,
21 necessary to get such a large check.

22 Q. Sure. They had to actually write the
23 check. They had to not have it caught by the
24 fraud systems and so on?

25 A. Among others, yes.

Page 24

1 Q. Any other instances in which your
2 research on advertising has related to
3 information security?

4 A. So of course, there are other
5 examples in the realm of advertising fraud of
6 which I've just given you one. A big one with a
7 large amount of money at issue and a criminal
8 indictment and so forth, but there are others
9 very much in the same vein.

10 Q. In which the fraudsters are causing
11 false reports to be made to advertisers or
12 advertising networks; is that right?

13 A. Broadly understood, yes.

14 Q. What peer review publications
15 resulted from your research on Internet
16 advertising systems?

17 A. The best known is my American
18 Economic Review article as to the gain theory of
19 sponsored search auctions. There are various
20 others, I believe each of them listed on my CV.

21 Q. Is your research on Internet
22 advertising a basis for any of the opinions in
23 your report?

24 A. Not specifically. In some areas
25 probably what I've learned about Internet

6 (Pages 21 to 24)

Page 25	Page 27
<p>1 advertising informs my understanding of other 2 information security matters and other matters 3 detailed in my report. 4 Q. In what way? 5 A. For example, information in 6 electronic form can be copied, often quite 7 easily and at minimal cost. A gives it to B, B 8 gives it to C, and the chain can continue more 9 quickly and more easily and more accurately in 10 electronic form than, for example, on paper. 11 I've seen that in spades in online advertising 12 where the supply chain between an advertiser and 13 a publisher can have literally a dozen 14 intermediaries all made possible by the low cost 15 of electronic copying. That's broadly at issue 16 in this case also and comes up in my report in 17 several areas. 18 Q. Are there any other ways in which 19 your research on Internet advertising systems 20 forms a basis for any of the opinions in your 21 report? 22 A. I'm just not sure. I could reread 23 the report with an eye to that question. I 24 considered the totality of my experience and 25 research, professional activities and so forth</p>	<p>1 engines was about certain results that were 2 systematically missing in certain countries. So 3 you'd go to the French version of Google, and 4 there would be some sites that would never come 5 up. Sometimes sites with terrible content that 6 might even be unlawful in France and sometimes 7 sites that seemed pretty unremarkable but 8 strangely would be missing nonetheless. 9 Other articles about quote unquote 10 bias, that is, the systematic favorable 11 treatment of some sources or some viewpoints 12 relative to others, methods of evaluating 13 whether such bias exists, preserving proof, 14 drawing comparisons and drawing inferences 15 between search engines on that question. 16 Q. Anything else? 17 A. I believe I've written about privacy 18 on search engines, about privacy of records of 19 users' activities. 20 Q. Anything else? 21 A. The size and prevalence of 22 advertising on search engines, other changes to 23 the layout, structure of visual presentation of 24 search engine results, the interaction between 25 Spyware and Adware on users' computers and</p>
Page 26	Page 28
<p>1 in drawing the conclusions that are in the 2 report. 3 Q. Nothing else, specifically, comes to 4 mind right now? 5 A. Not right now. 6 Q. The second item you mentioned is 7 search engines. What search engines have you 8 done research on? 9 A. I've looked at a variety of search 10 engines. I spent most of my time looking at 11 Google's practices, and Google is, of course, 12 the largest and most popular search engine in 13 most countries. I've also looked at Yahoo. 14 I've looked at Bing and its predecessors. I've 15 looked at Ask.com. I've looked at AOL. Various 16 others whose names aren't familiar to the 17 typical American consumer, but whose practices 18 I've also examined. 19 Q. What research did you do relating to 20 search engines? 21 A. I've written a variety of articles 22 about search engines. I've written about the 23 labeling of advertising on search engines. I've 24 written about the patterns of which results 25 appear where. My first article about search</p>	<p>1 search engines, search engine results. 2 Q. Anything else? 3 A. There probably are some more aspects 4 of search engines that I've written about. 5 Q. Do they come to mind? 6 A. Not right now. 7 Q. Did any of your research relate to 8 the security of search engines against attacks 9 from hackers? 10 A. Some of it, yes. 11 Q. What research is that? 12 A. For example, the research on Spyware 13 and Adware speaks to security issues on multiple 14 levels, security of the users' computers as 15 against the Spyware and Adware that have some 16 effects, potentially harmful effects, and 17 security and integrity of the search engine 18 result page to present results in the order and 19 format that the search engine intended, rather 20 than in some modified presentation, modified in 21 large part by the Spyware or Adware. 22 Q. The security issues you described in 23 your previous answer are security issues that 24 relate to the security of an Internet user's 25 computer rather than to a server; is that right?</p>

Page 29

1 MR. BONI: Object to form.

2 A. I guess I don't think of it quite
3 that way.

4 Q. Are you aware of any instance in
5 which Spyware or Adware has been installed on a
6 search engine's server?

7 A. I guess I wouldn't use those terms to
8 describe the kinds of problems that I've been
9 looking at.

10 Q. Are you aware of any situation in
11 which the data being served by a search engine's
12 servers has been affected by Spyware or Adware?

13 A. I'm aware of many instances where the
14 data served by a web server has been affected by
15 software installed onto the web server. Whether
16 that has occurred with search engines
17 specifically, I'm not sure one way or the other.

18 Q. You don't know of any such instance?

19 A. I guess it wouldn't usually be via
20 the mechanism of spyware or adware. If one
21 wanted to influence the results shown by a
22 search engine, there would be other ways to make
23 that influence, but typically one wouldn't use
24 the words Spyware or adware to describe those
25 practices.

Page 30

1 Q. Are you aware of any instance in
2 which a party seeking a higher search engine
3 ranking has been successful in installing
4 software on a search engine's servers to achieve
5 that goal?

6 A. Yes.

7 Q. What instance is that?

8 A. Google, itself, in order to grant its
9 own services preferred ranking installs software
10 onto its own search engine in order to achieve
11 that goal.

12 Q. Are you aware of any other such
13 instances?

14 A. Yes.

15 Q. What instances are you aware of?

16 A. I think other search engines also
17 typically do that to favor their own services
18 and their partner services and their prospective
19 partner services and others consistent with
20 their business objectives.

21 Q. Does Bing do that?

22 A. In some areas they do.

23 Q. What areas are those?

24 A. Well, I need to look at specific
25 searches, but, for example, if you were to

Page 31

1 search for a map, if you typed in Boston map
2 into Bing, I would expect that a map would
3 appear, and that it would be a Bing map, and
4 that there's a software program installed into
5 the Bing server that causes that Bing map to
6 appear.

7 Q. And that software was installed with
8 the authorization of the operator of that
9 server; is that right?

10 A. That's right.

11 Q. Are you aware of any instance in
12 which search rankings have been modified by
13 software which was installed without the
14 authorization of the operator of the search
15 engine?

16 A. I've perceived some ambiguity in your
17 question which makes it hard for me to answer.

18 Q. What's ambiguous about it?

19 MR. BONI: Object to form.

20 A. Why don't you just restate the
21 question.

22 Q. Sure. Are you aware of any instance
23 in which someone other than the search engine
24 has been successful in installing software on a
25 search engine's server for some purpose that was

Page 32

1 not authorized by the search engine?

2 MR. BONI: Object to form.

3 A. Well, the notion of installing
4 software onto the server has multiple levels.
5 Certainly, providing data to a server that the
6 server then processes, it's quite routine for
7 publishers to provide data to a search engine in
8 hopes that the search engine process it in a way
9 that provides the publisher with preferred
10 listings. And it's quite routine to do that
11 with predictable consequences; namely, obtaining
12 the preferred placement that is sought. That
13 happens, sadly, every day.

14 Q. What is the nature of the data that
15 you referred to that's sent to the server in
16 your previous answer?

17 A. Well, it's computer code. It's
18 interpreted by the server. Is it executed by
19 the server? I guess it depends. Some of the
20 code actually does have to be executed in order
21 to have meaning because it doesn't have any
22 meaning until it is executed. It can't stand
23 alone.

24 Q. What programming language is that
25 data written in?

8 (Pages 29 to 32)

1 A. It can be written in multiple
2 languages. Classically, it would be written
3 simply in HTML. More recently it would often be
4 written in JavaScript, in Flash. It could be
5 written in a variety of other languages also.
6 Typically, a modern search engine would
7 nonetheless be able to receive that computer
8 code, execute it, interpret it and draw
9 conclusions about its implications.

10 Q. And the code that you're talking
11 about is code that someone would post on their
12 website in order for the search engine to
13 download and index or otherwise -- or otherwise
14 use; is that right?

15 A. That's one way it could happen.

16 Q. What are the other ways?

17 A. One could provide that code solely to
18 the search engine and not to anyone other than
19 the search engine, and indeed I've found
20 examples of that and have written about that.
21 In fact, was invited to the Google campus for
22 the first time after I had found a particularly
23 notable example of that.

24 Q. And that is a situation in which a
25 web server operator would give a different

1 response to a request coming from a search
2 engine than coming from some other user?

3 A. That's right.

4 Q. And that response would be in the
5 form of sort of the elements that would
6 otherwise make up a web page like HTML,
7 JavaScript, CSS and so on?

8 A. Yes.

9 Q. Are you aware of any instance in
10 which the way in which the search engine
11 operates has been able -- has been able to be
12 modified by code that was downloaded from a
13 website that search engine was attempting to
14 index?

15 MR. BONI: Object to form.

16 A. I perceive some ambiguity in the
17 phrased way in which the search engine operates.

18 Q. The point of these web pages that are
19 served just to the search engine is to try and
20 get a higher search engine ranking for that
21 website, generally; is that right?

22 A. That is a common objective. It's not
23 the only objective, but it probably is the most
24 common.

25 Q. It might also be to try and reduce

1 the search engine ranking for some other website
2 or increase the search engine ranking for some
3 other website; is that right?

4 A. Those are other common objectives.

5 Q. And the way that they're trying to do
6 that is by providing input to the search engine
7 that the search engine will interpret in a way
8 that causes it to give that page a higher
9 ranking, for example; is that right?

10 A. That's one common strategy.

11 Q. They're not changing the algorithm
12 that's used to rank web pages; is that right?

13 A. The examples we've been discussing so
14 far don't change the algorithm.

15 Q. Are you aware of any instance in
16 which a hacker has been able to change the
17 search engine's algorithm.

18 A. Yes.

19 Q. What instances are those?

20 A. Google engineers last year fed
21 systemically deceptive, maybe false data, to
22 Microsoft's search engine in an attempt to
23 sabotage Microsoft search engine and cause it to
24 display results that were nonsensical and
25 purportedly incriminating.

1 Q. Could you tell me more about that?

2 A. Google engineers believed correctly
3 that Microsoft Internet Explorer and certain
4 Microsoft toolbars when configured with certain
5 optional advanced features would track users'
6 clicking on results both at Microsoft's search
7 engines and other search engines such as Google
8 in order to draw inferences about developments
9 of particular results to particular queries.

10 Google engineers on multiple
11 computers, all off of the Google campus, rather
12 in the engineers' residences, intentionally
13 provided false data to Microsoft in order to
14 contaminate the data collected by Microsoft in
15 order to demonstrate that this feature was
16 working exactly as Microsoft had stated that it
17 would work and exactly as Microsoft had intended
18 it to work. But by providing false data, they
19 were able to push the algorithm towards results
20 that were, in fact, nonsensical, thereby in
21 Google's view and the view of these staff
22 persons in some way demonstrating the
23 impropriety of Microsoft's activities in this
24 regard.

25 Q. Do you think that was wrong?

<p style="text-align: right;">Page 37</p> <p>1 A. I'm not sure.</p> <p>2 Q. What factors go into that answer?</p> <p>3 MR. BONI: Object to form.</p> <p>4 A. Well, on one hand, it's fair game to</p> <p>5 do what you want on your own computer in</p> <p>6 general; to install software, run searches and</p> <p>7 click results. One wouldn't think that by</p> <p>8 taking those steps with nothing more one had</p> <p>9 done anything improper. All of these searches</p> <p>10 were actual searches run by people, not by</p> <p>11 robots or automation. The results were clicked</p> <p>12 again by people not by robots or automation.</p> <p>13 Where I thought Google went the most</p> <p>14 astray was in their interpretation of what</p> <p>15 occurred. Had Microsoft done anything wrong?</p> <p>16 Google says they had. Google says that</p> <p>17 Microsoft shouldn't have collected this data.</p> <p>18 That even when users granted permission for</p> <p>19 Microsoft to collect the data, the permission</p> <p>20 wasn't the users' permission to give. Only</p> <p>21 Google can grant the permission for this data to</p> <p>22 be collected or so Google would have us believe,</p> <p>23 according to Google's statements on the subject.</p> <p>24 And there I'm not so sure that's a notion of</p> <p>25 two-party consent that, I think, just isn't</p>	<p style="text-align: right;">Page 39</p> <p>1 A. I'm not sure.</p> <p>2 Q. Are you aware of any instance in</p> <p>3 which the operation of a search engine has been</p> <p>4 modified by hackers other than the instance in</p> <p>5 which you just described?</p> <p>6 A. Yes.</p> <p>7 Q. What instance is that?</p> <p>8 A. I'm aware of a series of instances</p> <p>9 whereby hackers have intentionally sent clicks,</p> <p>10 either genuine clicks or fake clicks in order to</p> <p>11 inflate the apparent click-through rate of</p> <p>12 particular algorithmic results and particular</p> <p>13 advertisements in order to influence search</p> <p>14 engines' decisions about which algorithmic</p> <p>15 results and which advertisements to display and</p> <p>16 in what order to display them.</p> <p>17 Q. So by appearing to interact with the</p> <p>18 search engine as if they were search engine</p> <p>19 users, but, in fact, intending to manipulate the</p> <p>20 search engine itself, these hackers were able to</p> <p>21 change the internals of the search engine in</p> <p>22 that way?</p> <p>23 MR. BONI: Object to form.</p> <p>24 A. They were certainly able to change</p> <p>25 the order in which results appeared and which</p>
<p style="text-align: right;">Page 38</p> <p>1 grounded in any principle, regulation, law or</p> <p>2 other such authority in this area.</p> <p>3 Q. So the thing that Microsoft had done</p> <p>4 that Google said was inappropriate in your view,</p> <p>5 Google was not correct in their -- in their</p> <p>6 assessment?</p> <p>7 A. I'm sorry. I got a little bit</p> <p>8 muddled about who thought what.</p> <p>9 Q. Sorry. Do you think that Google was</p> <p>10 correct in their assessment of what Microsoft</p> <p>11 had done?</p> <p>12 A. I think they were correct on the</p> <p>13 facts of what data Microsoft had collected and</p> <p>14 how Microsoft had analyzed it.</p> <p>15 Q. Are you aware of any -- actually let</p> <p>16 me ask another question.</p> <p>17 Did the Bing search ranking algorithm</p> <p>18 change the result of Google's actions?</p> <p>19 A. I'm not sure.</p> <p>20 Q. Are you aware of any instance in</p> <p>21 which -- actually, strike that.</p> <p>22 Did any internal portion of the Bing</p> <p>23 search engine other than, of course, its index</p> <p>24 of all of the websites that it had indexed</p> <p>25 change as a result of Google's actions?</p>	<p style="text-align: right;">Page 40</p> <p>1 results appeared. You asked about the internals</p> <p>2 of the search engine. I'm not so sure about</p> <p>3 that, but it seems to me that the essence of the</p> <p>4 search engine is the output, and so if they were</p> <p>5 able to change the output, I think they were</p> <p>6 probably content with that.</p> <p>7 Q. But you don't know of any changes</p> <p>8 that have ever been made other than to the</p> <p>9 output as a result of hackers attempting to</p> <p>10 intrude upon search engines; is that right?</p> <p>11 A. As to hackers attempting to intrude</p> <p>12 on search engines, I know about some changes</p> <p>13 other than -- well, I know about some actions</p> <p>14 taken other than changes to the output.</p> <p>15 Q. Actions taken by whom?</p> <p>16 A. By the hackers.</p> <p>17 Q. What actions are those?</p> <p>18 A. It was reported in public news</p> <p>19 sources, I believe cited in my expert report</p> <p>20 that the Chinese hackers or suspected Chinese</p> <p>21 hackers who intruded into Google systems one to</p> <p>22 two years ago obtained access to source code,</p> <p>23 including obtaining the ability to change source</p> <p>24 code. Whether or not they used that ability,</p> <p>25 news coverage indicated that they obtained that</p>

Page 41	Page 43
<p>1 ability. And that would be an action taken 2 other than the action of changing result 3 ordering. 4 Q. Do you know whether those news 5 reports were accurate? 6 A. I think there were multiple indicia 7 of accuracy. 8 Q. Do you know what source code was 9 accessed? 10 A. I don't recall specifically. 11 Q. Do you know whether that source code 12 had anything to do with books? 13 A. I'm not sure. 14 Q. Do you know one way or the other? 15 A. I think the source cited in my expert 16 report probably could tell us in short order, 17 but I don't recall sitting here today. 18 Q. What is the source cited in your 19 expert report? 20 A. Shall I flip to it? 21 Q. Sure. I'll direct your attention to 22 the top of page 8, the bottom of page 7. 23 A. Great. So you've directed my 24 attention correctly first as to the indicia of 25 the liability. Footnote 18 cites the official</p>	<p>1 Q. Do you recall one way or the other 2 whether that cited article discusses whether 3 those responsible for the intrusion discussed in 4 the blog post or the intrusion discussed in 5 Paragraph 35 gained access to Google's source 6 code? 7 A. I don't recall. 8 Q. Do you know whether the McAfee report 9 mentions Google at all? 10 A. I think it does, but I'd want to go 11 and look at it again. It seems like the easier 12 way to answer your questions would be to review 13 the document itself. 14 Q. So you don't have a recollection as 15 to whether the document cited states that 16 hackers had specifically sought access to the 17 source code for Google systems and that hackers 18 had obtained the ability to alter the source 19 code for Google systems? 20 A. That quoting verbatim from my expert 21 report when I wrote that sentence of my report, 22 I reviewed the McAfee document at issue and 23 summarized it in that sentence, and I believe 24 the summary is accurate as written. 25 Q. But you don't remember whether that</p>
Page 42	Page 44
<p>1 Google blog and a statement from none other than 2 David Drummond. So if David says it is so, I 3 think that's a good prima facia reason to think 4 that it is. 5 Secondly, the analysis by McAfee, one 6 notch removed from Google to be sure, but with 7 the defensible methodology grounded in data that 8 they obtained from multiple sources, and 9 McAfee's trustworthiness I think requires no 10 further elaboration. Look, if McAfee says that 11 this is what happened and no one rebuts it, I 12 think that's a pretty good reason to believe 13 that it is so. 14 Q. Does the statement from David 15 Drummond that you cite in this report discuss 16 whether the hackers had access to source code? 17 A. It does not. 18 Q. Does the McAfee Labs blog post that 19 you cite in your report discuss whether hackers 20 had access to Google's source code? 21 A. I think the report does discuss it. 22 Footnote 19 gives you the URL to the full 23 original report. I'd want to review it further 24 before attempting to opine on exactly what it 25 says.</p>	<p>1 document mentioned Google at all? 2 MR. BONI: Object to form. 3 A. I think it did. It's just that the 4 fact that you ask about it in that way suggests 5 maybe you think it didn't, and rather than 6 speculate sitting here, I'd just take a moment 7 to go back and read the document to find out one 8 way or the other. 9 Q. Maybe we'll do that later today. 10 What peer review publications -- actually strike 11 that. 12 Other than the instances we've 13 discussed, that is, attempting by interaction 14 with the search engine by its ordinary 15 interfaces to modify search engine rankings or 16 by the intrusions described in Paragraph 35 of 17 your report, are you aware of any other 18 intrusions into search engines? 19 A. Yes. 20 Q. What intrusions are those? 21 A. First, I'm not sure that I'd describe 22 the actions of Google engineers using the 23 toolbar manipulation as the ordinary interfaces. 24 There's some of that that's ordinary, and 25 there's some of that that's quite extraordinary.</p>

<p style="text-align: right;">Page 45</p> <p>1 Putting that aside, I'm aware of other instances 2 in which website publishers have managed to 3 modify the operation of search engines in ways 4 not yet discussed. 5 Q. And did they do that by manipulating 6 the data that their own web pages sent to the 7 search engine's crawler? 8 A. In the example I'm thinking of right 9 now, yes. 10 Q. Do you know of any instances in which 11 that -- a different method was used? 12 A. Yes. 13 Q. What instance is that? 14 A. Some search engines including Google 15 search engine obtain a portion of their data, 16 not by a crawl but by a data feed, a particular 17 document using a particular pre-agreed structure 18 that provides particular information in a 19 particular format. And through certain methods 20 pertaining to the data feed, putting data in a 21 particular format, it's possible to manipulate 22 the results obtained by that data feed collector 23 in order to alter both the substance of the 24 results that are displayed and the format of the 25 display.</p>	<p style="text-align: right;">Page 47</p> <p>1 intrusion that you're discussing right now; is 2 that right? 3 A. No. I had in mind a different kind 4 of intrusion. 5 Q. What did you have in mind? 6 A. It's possible, at least historically 7 has sometimes been possible, to produce an 8 invalid syntax in your data feed such that the 9 very attempts to process your invalid data feed 10 can corrupt either the data stored in the search 11 engine servers or the method whereby the search 12 engine presents results to users causing 13 something else altogether to appear when a user 14 runs a search. 15 Q. What search engines have been the 16 victims of that type of attack? 17 A. I think multiple search engines have 18 been the victims of that kind of attack. 19 Q. Can you list the ones that you know 20 of? 21 A. I can't recall specifically. They're 22 not the big five U.S. search engines. 23 Q. And by providing data in a corrupted 24 form to these search engines, the fraudsters 25 were able to manipulate the results or change</p>
<p style="text-align: right;">Page 46</p> <p>1 Q. Is that data feed known as a site 2 map? 3 A. A site map is an example of a data 4 feed, but that's not what I was thinking of, 5 specifically. 6 Q. What were you thinking of? 7 A. I was thinking of a product data 8 feed. 9 Q. What's a product data feed? 10 A. Typically, it's a list of products 11 usually accompanied by descriptions, pricing 12 availability, perhaps images, other such 13 details. 14 Q. That's information that a search 15 engine takes in in order to know what products 16 are offered by a particular website; is that 17 right? 18 A. That's right. 19 Q. And by manipulating the data that's 20 given to the search engine you might be able to 21 appear to have products you don't or appear to 22 have products with different qualities than your 23 actual products; is that right? 24 A. Among other benefits. 25 Q. And that's the -- that's the type of</p>	<p style="text-align: right;">Page 48</p> <p>1 them in some way? 2 A. Yes. 3 Q. Were they able to gain root access to 4 the search engine's servers? 5 A. I don't think they sought root access 6 to the search engine's servers. I don't know 7 whether they were able to obtain it. 8 Q. Are you familiar with the term "root 9 access"? 10 A. Yes. 11 Q. What does root access mean? 12 A. Typically, the term "root access" is 13 used to refer to an operation mode of a computer 14 system where it's possible to change any aspect 15 of the computer system without any limitation 16 whatsoever. 17 Q. Are you aware of any situation in 18 which an outside intruder has been able to gain 19 root access to a search engine's servers? 20 A. I'm not aware one way or the other. 21 Q. What peer review publications have 22 resulted from your research on search engines? 23 A. Can I flip through the CV? 24 Q. Sure. 25 A. Be quickest that way. So that papers</p>

<p style="text-align: right;">Page 49</p> <p>1 previously discussed as to advertising, many of 2 them are as to search engine advertising and 3 thus fit dually. For example, the first three 4 under the heading "Representative Research" all 5 are as to search engine advertising. Others in 6 this list also as to search engine advertising, 7 the article about typo-squatting is about a 8 particular place where advertisements can be 9 placed via a search engine onto other sites. If 10 there's an element of advertising, there's an 11 element of search engines. 12 The article titled "Adverse 13 Selection" and "Online Trust Certifications" in 14 search results contains quite an extended 15 discussion of the trustworthiness of certain 16 search results. 17 The "Rustlers and Sheriff's" piece 18 considers certain practices at search engines. 19 Internet filtering in China discusses the 20 filtering of certain search results, advertising 21 disclosures, label search engines. It 22 continues. There are quite a few. 23 Q. Is your research on search engines a 24 basis for any of the opinions in your report? 25 A. I think it is generally, yes.</p>	<p style="text-align: right;">Page 51</p> <p>1 my writing in this area began with an instance 2 in which Buy.com, a popular online retailer, was 3 mistakenly publishing the names, street address 4 and phone number of every customer who had ever 5 made a product return to Buy.com. That was an 6 error, a breach of their privacy policy, which 7 to they credit, they corrected after I brought 8 to their attention. 9 I've uncovered other privacy errors, 10 instances in which the Google JotSpot service 11 was sharing documents specifically contrary to 12 users' instructions to JotSpot. You tell it not 13 to share your document with anyone, and they 14 share it anyway. And a problem that was 15 corrected by Google somewhat after I brought it 16 to their attention. 17 Q. Did any of your research on privacy 18 relate to security against computer intrusion? 19 A. I think of privacy and security as 20 two sides of the same coin. Privacy is security 21 of your private information, and so I would say 22 that all of the privacy matters relate to 23 security. Security from what? Security from 24 viewing, security from intrusion, broadly 25 understood.</p>
<p style="text-align: right;">Page 50</p> <p>1 Q. How so? 2 A. My work on search engines explores 3 the operation and incentives of interconnected 4 systems the way that the systems can be used and 5 have been used and the consequences of that use. 6 Q. What does that have to do with the 7 opinions you set forth in your report? 8 A. My report discusses the way that 9 certain books search services can be used and 10 what's likely to happen if they are used in that 11 way, which is informed by the way other online 12 systems that are already more broadly in use, 13 the way that they have been used and what has 14 happened there. 15 Q. So they influence your opinions in 16 that that which has happened already to search 17 engines may happen to book search engines in the 18 future? 19 A. That's right. 20 Q. The next area of interest or research 21 that you mention is privacy. What research have 22 you done on electronic privacy? 23 A. I mentioned one article as to the 24 Google Toolbar privacy problems. I've written a 25 series of other pieces about privacy. I think</p>	<p style="text-align: right;">Page 52</p> <p>1 Q. Do you draw a distinction between 2 unauthorized access to computer systems and 3 malfunctioning computer systems that disclose 4 private information? 5 MR. BONI: Object to form. 6 A. I certainly draw a distinction 7 between systems that are malfunctioning versus 8 systems that are functioning in the way that 9 their designers intended. Though, of course, 10 figuring out what their designers intended and 11 whether a malfunction has actually occurred can 12 sometimes be difficult. I'm not so sure about 13 the specific distinction that you raise. Maybe 14 you could rephrase it, and I could give you a 15 better answer. 16 MR. GRATZ: Let's change the tape. 17 THE VIDEOGRAPHER: The end of Tape 1. 18 Off the record 11:03 a.m. 19 (Brief recess.) 20 THE VIDEOGRAPHER: Here begins Tape 21 No. 2 in today's deposition of Benjamin Edelman. 22 Back on the record 11:09 a.m. 23 Q. Mr. Edelman, when you refer to 24 security, you're speaking broadly of everything 25 from avoiding intrusions into computer systems</p>

<p style="text-align: right;">Page 53</p> <p>1 to steal confidential data to ensuring that the</p> <p>2 data collected by websites is fully disclosed to</p> <p>3 users; is that right?</p> <p>4 MR. BONI: Object to form.</p> <p>5 A. I wouldn't ordinarily say that</p> <p>6 disclosing information collection practices</p> <p>7 falls within security. I think it does on a</p> <p>8 broad understanding of security, but I probably</p> <p>9 wouldn't have used the term that way in the</p> <p>10 ordinary course.</p> <p>11 Q. In your report when you discuss</p> <p>12 security, are you applying the broad -- the</p> <p>13 broad view of security you mention in your last</p> <p>14 answer or some narrower view?</p> <p>15 A. In general, I think I'm applying a</p> <p>16 slightly narrower view than the -- than my last</p> <p>17 answer and then the question that preceded my</p> <p>18 last answer.</p> <p>19 Q. What scope of the term "security" do</p> <p>20 you apply in your report?</p> <p>21 A. When I use the term "security" in the</p> <p>22 report, I begin with notions that attach to</p> <p>23 changing the underlying code of the computer</p> <p>24 system; for example, obtaining root access and</p> <p>25 the benefits associated with that, but I</p>	<p style="text-align: right;">Page 55</p> <p>1 engineer intended, that the telephone rings when</p> <p>2 it is called, and yet in a way quite contrary to</p> <p>3 what the user intended, probably even contrary</p> <p>4 to what the phone company intended, at least in</p> <p>5 a marketing sense when they touted the benefits</p> <p>6 of obtaining a telephone to your residence.</p> <p>7 Q. And that is encompassed in the use of</p> <p>8 the term "security" as you use it in your</p> <p>9 report?</p> <p>10 A. The analog in an information system</p> <p>11 is encompassed.</p> <p>12 Q. What is the -- sorry, I don't mean to</p> <p>13 interrupt. What is the analog in an information</p> <p>14 system?</p> <p>15 MR. BONI: Why don't you ask the</p> <p>16 question and let him answer the question. You</p> <p>17 were in the middle of an answer, but let's make</p> <p>18 sure we're clear on what the question was. So</p> <p>19 that you can answer it. You want to read back</p> <p>20 the last question, please.</p> <p>21 (Last question read back.)</p> <p>22 Q. Are prank calls in the middle of the</p> <p>23 night encompassed within the term "security" as</p> <p>24 you use it in your report?</p> <p>25 A. I think prank calls may not be the</p>
<p style="text-align: right;">Page 54</p> <p>1 definitely also include taking advantage of the</p> <p>2 computer system working in exactly the way that</p> <p>3 it's installed or operator intended.</p> <p>4 So for example, Frank calls in the</p> <p>5 middle of the night calling your telephone over</p> <p>6 and over when you're trying to sleep. That's</p> <p>7 not a malfunction of the telephone. The</p> <p>8 telephone is working exactly as intended when</p> <p>9 someone calls you, the ringer activates and</p> <p>10 makes a sound. And yet from your perspective,</p> <p>11 your telephone is quite insecure because it</p> <p>12 keeps waking you up when you're trying to sleep.</p> <p>13 So too in the context of obtaining</p> <p>14 information online. If a large amount of</p> <p>15 information can be obtained perhaps piece by</p> <p>16 piece, that could be an example of a lack of</p> <p>17 security.</p> <p>18 Q. What security issue is presented by</p> <p>19 prank calls in the middle of the night? I'm</p> <p>20 asking in what sense is that a security issue?</p> <p>21 A. One wouldn't ordinarily use the word</p> <p>22 security to describe the freedom from being</p> <p>23 awoken by the telephone. The sense in which</p> <p>24 that example is helpful is that it gives an</p> <p>25 example of a system working exactly as the</p>	<p style="text-align: right;">Page 56</p> <p>1 most helpful example in understanding what I</p> <p>2 mean by the word "security." But a very similar</p> <p>3 example actually may be more helpful; Spam</p> <p>4 e-mail, unsolicited commercial e-mail, is an</p> <p>5 example of the e-mail system on one view working</p> <p>6 completely reliably. The Spamer sends you 4,000</p> <p>7 e-mails, and your e-mail program displays to you</p> <p>8 4,000 e-mails. It's working perfectly, a</p> <p>9 hundred percent, and yet from your perspective</p> <p>10 as a user, your e-mail is quite insecure. It</p> <p>11 has been clogged up by the Spamer, and then the</p> <p>12 important message from your friend or associate</p> <p>13 is buried under the mountain of Spam. So I</p> <p>14 would use the word "security" to describe that</p> <p>15 problem and that concern.</p> <p>16 Q. And that category of concern and that</p> <p>17 scope of security is -- strike that.</p> <p>18 That's the scope of the term</p> <p>19 "security" that you use in your report?</p> <p>20 A. That kind of problem, a system that</p> <p>21 works maybe too well, that works in a way</p> <p>22 different from what the marketing folks</p> <p>23 intended, yet consistent with what the</p> <p>24 engineering folks intended, that's an example of</p> <p>25 something that I believe does fall within the</p>

1 meaning of the word "security."

2 Q. Is your research on electronic
3 privacy a basis for any of the opinions in your
4 report?

5 A. It is.

6 Q. What opinions are those?

7 A. I have opinions on the difficulty of
8 securing access to information, of limiting
9 access so that particular users can obtain
10 particular information in particular
11 circumstances, but not other information in
12 other circumstances. Those are questions and
13 concerns that arise often in the context of
14 privacy and also arise in the context of the
15 book services here at issue.

16 Q. What has your research into privacy
17 shown you that you relied on in forming your
18 opinions in your report?

19 A. First, my research into privacy has
20 shown me just how difficult these challenges
21 are, that even excellent companies with capable
22 engineers and diligent managers sometimes fail
23 to achieve what they set out to achieve. They
24 make mistakes, frankly. These are difficult
25 areas where perfection is unlikely and not often

1 seen.

2 Second, my work on privacy has
3 distinctively shown the difficulty of securing
4 information so that some people can get some of
5 it some of the time, but not everyone can get
6 everything all of the time. I suspect it
7 wouldn't be hard to design an information system
8 for which no one can get information ever. Step
9 one, set the information on fire. Step two,
10 wait for the fire to consume it completely. The
11 end. That would be straightforward actually. I
12 think we could run that system so reliably that
13 it would operate with a very, very high level of
14 performance.

15 On the other hand, securing the
16 information so that only some people can get it
17 or people can only get part of it, requires
18 engineering decisions that are actually quite a
19 bit more difficult.

20 Q. Is that a task that is undertaken by
21 every electronic information storage system?

22 MR. BONI: Object to form.

23 A. I wouldn't say every electronic
24 information storage system undertakes that task.

25 Q. What electronic information storage

1 systems other than the example you gave of
2 setting the information on fire and never
3 looking at it again, what infor -- electronic
4 information storage systems do not present that
5 difficulty?

6 A. For example, information that is
7 freely available to the public in unlimited
8 quantity and without restriction, the U.S.
9 government printing office allows you to obtain
10 the U.S. code in whatever quantity you want as
11 often as you want, free of charge. They face
12 minimal need to restrict access to the
13 information that they provide.

14 Even ordinary Google search, you can
15 run as many searches as you want and no great
16 harm results if you run too many searches. The
17 operators of the search service might try to
18 figure out if you're a robot, and if you are,
19 they might try to stop you from running
20 searches, but if they fail to stop some robots
21 some of the time, no great harm results. So
22 those are much lower stakes games.

23 Q. Is there an index underlying the
24 Google search service?

25 MR. BONI: Object to form.

1 A. My understanding is that there is an
2 index underlying the Google search service.

3 Q. And one can by running searches query
4 that index at least in part; is that right?

5 A. Yes.

6 Q. Are you aware of any instance in
7 which the entire Google search index has been
8 acquired by an outside party?

9 A. I'm not aware of any instance in
10 which an outside party has obtained the entire
11 Google search index.

12 Q. So in that sense, Google has been
13 successful in permitting access to certain
14 information under certain circumstances and not
15 to a bulk download of the whole; is that right?

16 A. I don't think that the facts just
17 discussed supported the conclusion in your last
18 question.

19 Q. Why not?

20 A. There have been instances in which
21 users have used the Google search service to
22 obtain more information than Google intended to
23 provide and use that information even for
24 harmful purposes. So the fact that Google
25 managed to prevent any single person from

1 obtaining all of the information doesn't mean
2 that the system is working as well as your last
3 question suggested.

4 Q. Google has successfully permitted
5 access to certain information and not other
6 information with respect to its search service;
7 is that right?

8 A. You know the word "successful" is
9 tricky. When an editor at CNET obtained the
10 home address and charitable contributions of the
11 then CEO of Google, Google, using the Google
12 search tools, Google responded in quite a
13 negative way, including banning that publication
14 from interviewing any Google staff for a full
15 year.

16 So that seems to be an instance
17 wherein Google thought that its own search
18 service had either malfunctioned or had been
19 abused by someone who had taken advantage of the
20 search engine providing more information than it
21 should have provided.

22 Q. Did the search engine malfunction in
23 that instance?

24 A. In my view it did not. In my view it
25 functioned exactly as the engineers intended.

1 Q. Did the search engine provide any
2 information in that instance that its technical
3 design indicated that it should not provide?

4 A. I don't think so.

5 Q. That was an instance in which the
6 search engine provided information that had been
7 indexed from a third-party website; is that
8 right?

9 A. At least in part.

10 Q. And the information, the presence of
11 the information on a third-party website was
12 that which was objected to rather than the fact
13 that Google search engine had made that
14 information able to be found; is that right?

15 A. I'm not quite sure what --

16 MR. BONI: Object.

17 A. -- Google objected to in that
18 circumstance.

19 Q. Do you think that that was a security
20 breach -- strike that.

21 Do you think that the instance in
22 which a Google employee's home address was able
23 to be found from a third-party website using the
24 Google search engine was a security breach?

25 MR. BONI: Object to form.

1 A. I probably wouldn't have used the
2 phrase "security breach" to characterize that
3 occurrence.

4 Q. Are you aware of any instance in
5 which Google's search ranking algorithm has been
6 made public?

7 A. I'm aware of some instances where a
8 portion of -- portions of the algorithm,
9 specific decisions and specific circumstances
10 have been made public.

11 Q. That's because they had been deduced
12 by looking at the results of searches; is that
13 right?

14 A. That's one way, but it's not the only
15 way.

16 Q. Had they been acquired by intruding
17 into Google's servers?

18 A. I'm not sure. It's possible that
19 some have, but I don't have any examples of that
20 in mind.

21 Q. You don't know that that's ever
22 happened?

23 A. I don't know that anyone has ever
24 obtained information about algorithms by, for
25 example, obtaining root level access as

1 discussed.

2 Q. Would you agree with me that the
3 Google search engine is not -- strike that.

4 Would you agree with me that the
5 Google search engine is a way of allowing people
6 to get access to some but not all of the
7 information that Google stores?

8 MR. BONI: Object to form.

9 A. Certainly there's some information
10 that Google stores that you can't access using
11 the Google search engine. You can't access
12 Google's internal payroll data using Google
13 search engine, and yet that is data that Google
14 stores. So does the Google search engine
15 provide access to some but not all? Yes, it
16 provides access to some but not all.

17 Q. And there are some search results
18 that would otherwise be displayed in Google's
19 search results that have been removed for one
20 reason or another; are you familiar with that?

21 A. Yes.

22 Q. And those search results are not
23 displayed to users; is that right?

24 A. In certain circumstances some of the
25 results are not displayed to users.

Page 65

1 Q. Are you aware of any instance in
2 which an intruder has been able to gain access
3 to those search results which Google has
4 removed?

5 A. Yes, I think I've done that
6 personally.

7 Q. Could you tell me about that?

8 A. So the project I described previously
9 where certain sites were missing from Google.FR,
10 the French version of Google, I ran a set of
11 comparisons, and I recall tens of thousands of
12 comparisons between Google.com and Google.FR.
13 As an intruder I was able to nonetheless make
14 that comparison between the two Google search
15 services and determine which results were
16 omitted.

17 Q. In what sense were you an intruder?

18 A. I was certainly an outsider to
19 Google. I had no privileged access to their
20 computer systems, no special account, no root
21 access, and yet I was able to obtain this
22 information which Google didn't otherwise make
23 available to the public and use that information
24 to demonstrate that Mr. Drummond himself had
25 made false statements on an official written

Page 66

1 statement of Google policy statements that
2 turned out to be contrary to the facts as I
3 demonstrated them.

4 Q. Do you think that Mr. Drummond was
5 lying?

6 A. He wasn't telling the truth.

7 Q. Do you think that that was wrong?

8 A. I'm not sure if he knew subjectively,
9 internally at the time when he made the false
10 statement, I don't know whether he knew that it
11 was false.

12 Q. Do you think that Google should be
13 punished for that?

14 A. You know, the damage to the consumer
15 public was that people thought Google was a
16 little bit better as a search engine than it
17 really was. Of all of the misrepresentations of
18 product attributes or qualities, I don't think
19 this is the most significant or the most
20 material.

21 Q. Of all of Google's
22 misrepresentations?

23 A. Yes.

24 Q. Tell me about Google's other
25 misrepresentations?

Page 67

1 A. One that I've been thinking about in
2 some detail is the claim that results come from
3 an algorithm, which I think is at the very least
4 deceptive because it fails to give full credit
5 to the significant control and judgment that
6 staff exercised in configuring the algorithm and
7 in otherwise overriding the algorithm, adjusting
8 search results. I think that that false
9 statement probably is material. It's quite a
10 few users who care quite a bit about whether
11 they're getting a computer's opinion or a
12 person's opinion, and that's a subject on which
13 Google has made very firm commitments over a
14 period of years.

15 Q. Do you think that Google was doing
16 something bad by making those commitments?

17 MR. BONI: Object to form.

18 A. I think there were multiple forces
19 within Google. Some staff wanted the service to
20 work in one way. Some wanted it to work in a
21 different way. And we see that internal tension
22 borne out in inconsistent statements by various
23 Google staff, as well as inconsistent practices,
24 both inconsistent at a given moment in time and
25 inconsistent over time.

Page 68

1 Q. Do you think that Google lied to the
2 public?

3 MR. BONI: Object to form.

4 A. I think there are some subjects on
5 which Google has been less than forthright.
6 There probably are some areas where Google's
7 staff simply didn't tell the truth. But
8 sometimes, perhaps mistakenly, based on
9 incomplete information available to the given
10 person making the statement, there might be
11 instances in which Google affirmatively made
12 false statements.

13 Just yesterday, I suppose the UK
14 privacy commissioner announced their
15 investigation alleging exactly that, and so I
16 wouldn't be alone in thinking that some false
17 statements may have been made.

18 Q. Do you think that Google should be
19 punished for making those statements?

20 MR. BONI: Object to form.

21 A. I guess you'd have to look at the
22 specific statement, the specific statutory basis
23 for any enforcement action, but I think all the
24 laws should be enforced strictly as to all
25 potential violators, and so I'd have to look one

17 (Pages 65 to 68)

Page 69

1 by one.

2 Q. Have you ever created a data
3 base-backed website?

4 A. Yes.

5 Q. Could you give me an example of such
6 a site?

7 A. Sure. I have a website that gives
8 examples of false and deceptive advertisements
9 that I saw at Google, and I stored those
10 advertisements in a database and then displayed
11 that database to interested viewers of that
12 portion of my website.

13 Q. What's the URL of that website?

14 A. Ben Edelman.org/PPC-scams maybe slash
15 list. I'm not sure about the slash list, but I
16 think that's correct.

17 Q. This is a website that you've created
18 that includes a number of advertisements shown
19 via Google's ad network; is that right?

20 A. These are all advertisements that I
21 personally saw on the Google search engine which
22 is -- you could call it the Google ad network.
23 I'd probably call it just the Google search
24 engine, to be very clear about it. There might
25 be a very few that were submitted by outsiders

Page 70

1 that I personally verified before adding them to
2 this list.

3 Q. Does this include ads from any other
4 search engines?

5 MR. BONI: I'm sorry, Joe, does what
6 include? The list?

7 Q. Does your PPC -- so this web page is
8 about false or deceptive paper click ads; is
9 that right?

10 A. Yes.

11 Q. Does it include false or deceptive
12 paper click ads from anywhere but Google?

13 A. I don't recall.

14 Q. Can you think of any ads that it
15 includes from places other than Google?

16 A. I suspect that many of these
17 advertisers were using other search engine
18 advertising platforms, also.

19 Q. But your website is just about the
20 Google ads; is that right?

21 A. I believe my website lists the search
22 term that I entered into Google and the position
23 and location on which I saw that ad at Google,
24 and, in fact, in general provides an image
25 screen shot, a partial image screen shot of the

Page 71

1 portion of the Google results page where I saw
2 that advertisement.

3 Q. What sort of database is behind this
4 page?

5 A. I believe this one actually is a text
6 file that is processed by text to database
7 engine and then sorted and output into the HTML
8 in the way that you may be viewing now.

9 Q. Do any database queries occur at the
10 time a user visits the web page?

11 A. Yes.

12 Q. Is there any information in the
13 database that's not displayed?

14 A. Yes.

15 Q. What information is that?

16 A. I think the exact date and time of
17 submission, the IP address of submission, the
18 e-mail address of the user who made the
19 submission. There probably are some other
20 fields.

21 Q. And have you been successful in
22 preventing that other information from being
23 displayed?

24 A. I've been successful in preventing
25 that information from being displayed at the

Page 72

1 specific URL that I dictated to you. Whether
2 I've been successful in preventing that
3 information from being obtained by others at
4 other URLs, I'm not sure.

5 Q. Could you explain your last answer.

6 A. Maybe someone knows how to get that
7 material from my web server even though I didn't
8 intend to provide it.

9 Q. Do you know whether anyone has?

10 A. I don't know one way or the other.

11 Q. Have you taken measures to prevent
12 that?

13 A. I've attempted to.

14 Q. And as far as you know, you've been
15 successful?

16 MR. BONI: He just said he doesn't
17 know one way or the other.

18 A. I'm really not sure in that if I had
19 been unsuccessful, I doubt anyone would tell me
20 that I had been unsuccessful.

21 Q. How many submissions on this page are
22 from people other than you?

23 A. I think not very many. It never
24 really took off. I wouldn't be surprised if it
25 was less than ten.

18 (Pages 69 to 72)

<p style="text-align: right;">Page 73</p> <p>1 MR. BONI: Joe, by "this page," could</p> <p>2 you just put into the record what you're</p> <p>3 referring to that you have up on your laptop,</p> <p>4 the website URL in question.</p> <p>5 MR. GRATA: Sure.</p> <p>6 MR. BONI: So the record's complete.</p> <p>7 MR. GRATZ: It was the URL -- I'm</p> <p>8 referring by "this page" to the URL that</p> <p>9 Mr. Edelman dictated to me; namely,</p> <p>10 www.BenEdelman.org/PPC-scams/list.</p> <p>11 MR. BONI: Thank you.</p> <p>12 Q. If you were unsuccessful in</p> <p>13 preventing that information in the database from</p> <p>14 being taken by an intruder, the private e-mail</p> <p>15 addresses of those who submitted advertisements</p> <p>16 to you for display on this page would be</p> <p>17 disclosed; is that right?</p> <p>18 A. Yes.</p> <p>19 Q. And their IP addresses would be</p> <p>20 disclosed; is that right?</p> <p>21 A. I believe it would be the IP address</p> <p>22 of the user at the time of submission, which</p> <p>23 might or might not be quote unquote their IP</p> <p>24 address in any lasting sense.</p> <p>25 Q. Do you consider that to be private</p>	<p style="text-align: right;">Page 75</p> <p>1 Google offers vouchers and similar prepurchase</p> <p>2 discounts. And then in light of the user's</p> <p>3 concern, this tool will actually write a</p> <p>4 complaint letter grounded in applicable law at</p> <p>5 the user's direction customized in light of the</p> <p>6 user's concerns, the user's state of residence,</p> <p>7 the merchant's states of the residence, the</p> <p>8 voucher services state of residence, citing</p> <p>9 appropriate authority for the user then to</p> <p>10 submit if they so choose.</p> <p>11 Q. Does it store the submission in a</p> <p>12 database?</p> <p>13 A. It does.</p> <p>14 Q. And those submissions include the</p> <p>15 e-mail addresses of those who submit?</p> <p>16 A. Yes.</p> <p>17 Q. Are you aware of any intrusion into</p> <p>18 that database resulting in the -- resulting in</p> <p>19 the taking of those e-mail addresses?</p> <p>20 A. I am not.</p> <p>21 Q. What security measures do you have in</p> <p>22 place to prevent that sort of intrusion?</p> <p>23 A. One important security measure that</p> <p>24 my technician student installed at my direction</p> <p>25 was that the system never stores the voucher</p>
<p style="text-align: right;">Page 74</p> <p>1 information nonetheless?</p> <p>2 A. It depends, but sometimes it is.</p> <p>3 Q. And you consider this security of</p> <p>4 this website from intrusion good enough to</p> <p>5 include that private information in the database</p> <p>6 which lies behind it; is that right?</p> <p>7 MR. BONI: I'm sorry. Object to</p> <p>8 form. That characterizes the witness's</p> <p>9 testimony.</p> <p>10 A. I consider this approach suitable</p> <p>11 under the circumstances, primarily due to the</p> <p>12 nature and quantity of the information being</p> <p>13 secured.</p> <p>14 Q. And if there were higher value</p> <p>15 information, you would regard greater security</p> <p>16 measures as being necessary?</p> <p>17 A. Certainly appropriate and possibly</p> <p>18 necessary.</p> <p>19 Q. Have you -- do you operate any other</p> <p>20 database-backed website?</p> <p>21 A. Yes.</p> <p>22 Q. What websites are those?</p> <p>23 A. I have a website called Voucher</p> <p>24 Complaints.org whereby users can register their</p> <p>25 consumer law grievance as to Groupon vouchers,</p>	<p style="text-align: right;">Page 76</p> <p>1 number of a user's pre-purchased voucher. That</p> <p>2 means that the most important piece of</p> <p>3 information, the information that actually has</p> <p>4 cash redeemable value is not in our server ever,</p> <p>5 not even for instant. So if we got hacked,</p> <p>6 there wouldn't be any money to be taken, nor</p> <p>7 anything that's redeemable for goods or</p> <p>8 services.</p> <p>9 Q. Do you operate any other data</p> <p>10 based-back websites?</p> <p>11 A. Yes.</p> <p>12 Q. What websites are those?</p> <p>13 A. The website query.ipensatori.com.</p> <p>14 That's i-p-e-n-s-a-t-o-r-i.com.</p> <p>15 Q. What is ipensatori.com?</p> <p>16 A. That's a domain name registered by my</p> <p>17 friend, and for some purposes, business partner,</p> <p>18 Wesley Brandi.</p> <p>19 Q. For what purposes is Mr. Brandi your</p> <p>20 business partner?</p> <p>21 A. We have a collaboration in detecting</p> <p>22 certain online advertising fraud and certain</p> <p>23 other improprieties.</p> <p>24 Q. What other improprieties are those?</p> <p>25 A. We're still figuring it out. But we</p>

<p style="text-align: right;">Page 77</p> <p>1 have a general purpose detection tool that can</p> <p>2 detect all manner of things happening on the</p> <p>3 Internet that shouldn't happen, and depending on</p> <p>4 client needs, I suppose we configure it</p> <p>5 appropriately.</p> <p>6 Q. The database that lies behind</p> <p>7 query.ipensatori.com, does it include any</p> <p>8 confidential information?</p> <p>9 A. It does.</p> <p>10 Q. What information is that?</p> <p>11 A. There are two separate data bases.</p> <p>12 There's a database of the users who have made</p> <p>13 requests to the query tool, and the query tool</p> <p>14 retains information about who used it, name,</p> <p>15 e-mail address, employer, what the search was.</p> <p>16 Some of those fields, of course, being optional.</p> <p>17 And secondly, there's a database of</p> <p>18 our research findings. The purpose of the tool</p> <p>19 is to allow users to view a portion of our</p> <p>20 research findings, and so our research findings</p> <p>21 are embodied in the database that the tool</p> <p>22 accesses as needed.</p> <p>23 Q. Do you make the entirety of your</p> <p>24 research findings available for bulk download?</p> <p>25 MR. BONI: Object to form.</p> <p style="text-align: right;">Page 78</p> <p>1 A. We do not make the entirety available</p> <p>2 for bulk download.</p> <p>3 Q. Why not?</p> <p>4 A. We prefer to obtain some records.</p> <p>5 I'll be it, limited and minimal, but still some</p> <p>6 of who accesses which portions of the database.</p> <p>7 Q. Would fraudsters be interested in the</p> <p>8 results of your research?</p> <p>9 A. I'm not sure.</p> <p>10 MR. BONI: Object to form. Go ahead,</p> <p>11 Ben.</p> <p>12 A. We thought about that at some length</p> <p>13 and concluded that we could publish this data</p> <p>14 such that even if a fraudster took the entirety</p> <p>15 of the data, it wouldn't really give them any</p> <p>16 significant advantage in perpetrating their</p> <p>17 fraud or in avoiding detection by us or anyone</p> <p>18 else.</p> <p>19 Q. Do you know whether the entirety of</p> <p>20 the data lying behind the query.ipensatori.com</p> <p>21 website that you operate has been taken by an</p> <p>22 intruder?</p> <p>23 A. I believe that it has not been, but</p> <p>24 it's hard to say for sure.</p> <p>25 Q. And you say it's hard to say for sure</p>	<p style="text-align: right;">Page 79</p> <p>1 because even a well-secured electronic system is</p> <p>2 not entirely foolproof in all circumstances?</p> <p>3 A. That's one of the reasons.</p> <p>4 Q. Why else?</p> <p>5 A. There are quite a few attack modes</p> <p>6 that would be unlikely to leave any records or</p> <p>7 fingerprints or other evidence that could be</p> <p>8 detected, or if it could be detected, then I</p> <p>9 would actually successfully detect personally,</p> <p>10 given my skills and capabilities, and given that</p> <p>11 I have other activities and don't spend that</p> <p>12 much time each day checking whether anyone has</p> <p>13 attacked this tool.</p> <p>14 Q. With additional skills and additional</p> <p>15 time to do so, would that it make it more likely</p> <p>16 that you would detect an attack?</p> <p>17 A. Sure. Putting more time into it</p> <p>18 would make it more likely that I would detect</p> <p>19 it. Conversely, if I put better data into the</p> <p>20 tool, that would make it more likely that</p> <p>21 someone would want to attack it and would</p> <p>22 redouble his efforts to attack it without being</p> <p>23 detected. So there are multiple factors that</p> <p>24 can make it both more and less likely that an</p> <p>25 attack would occur or would be detected if it</p> <p style="text-align: right;">Page 80</p> <p>1 did occur.</p> <p>2 Q. So you're not aware of any such</p> <p>3 attacks sitting here today?</p> <p>4 A. That's right.</p> <p>5 Q. Do you operate any other data</p> <p>6 based-backed websites?</p> <p>7 A. I do.</p> <p>8 Q. Could you list them for me?</p> <p>9 A. I think there are many of them. And</p> <p>10 even the tense of your question operate versus</p> <p>11 used to operate.</p> <p>12 Q. Just sticking with right now which of</p> <p>13 the data based-backed sites -- which of the data</p> <p>14 based-backed websites that you operate contains,</p> <p>15 in your estimation, the most high value data?</p> <p>16 MR. BONI: Object to form.</p> <p>17 Q. And by "high value," let me -- let me</p> <p>18 clarify that. The data most attractive to an</p> <p>19 intruder?</p> <p>20 MR. BONI: Same objection. Joe, do</p> <p>21 you mean relative to his universe of data based</p> <p>22 backed websites or more in the absolute.</p> <p>23 Q. Rank them in order in your head and</p> <p>24 give me the first one.</p> <p>25 A. Yes. The first one is the internal</p>
<p>1 A. We do not make the entirety available</p> <p>2 for bulk download.</p> <p>3 Q. Why not?</p> <p>4 A. We prefer to obtain some records.</p> <p>5 I'll be it, limited and minimal, but still some</p> <p>6 of who accesses which portions of the database.</p> <p>7 Q. Would fraudsters be interested in the</p> <p>8 results of your research?</p> <p>9 A. I'm not sure.</p> <p>10 MR. BONI: Object to form. Go ahead,</p> <p>11 Ben.</p> <p>12 A. We thought about that at some length</p> <p>13 and concluded that we could publish this data</p> <p>14 such that even if a fraudster took the entirety</p> <p>15 of the data, it wouldn't really give them any</p> <p>16 significant advantage in perpetrating their</p> <p>17 fraud or in avoiding detection by us or anyone</p> <p>18 else.</p> <p>19 Q. Do you know whether the entirety of</p> <p>20 the data lying behind the query.ipensatori.com</p> <p>21 website that you operate has been taken by an</p> <p>22 intruder?</p> <p>23 A. I believe that it has not been, but</p> <p>24 it's hard to say for sure.</p> <p>25 Q. And you say it's hard to say for sure</p>	<p>1 did occur.</p> <p>2 Q. So you're not aware of any such</p> <p>3 attacks sitting here today?</p> <p>4 A. That's right.</p> <p>5 Q. Do you operate any other data</p> <p>6 based-backed websites?</p> <p>7 A. I do.</p> <p>8 Q. Could you list them for me?</p> <p>9 A. I think there are many of them. And</p> <p>10 even the tense of your question operate versus</p> <p>11 used to operate.</p> <p>12 Q. Just sticking with right now which of</p> <p>13 the data based-backed sites -- which of the data</p> <p>14 based-backed websites that you operate contains,</p> <p>15 in your estimation, the most high value data?</p> <p>16 MR. BONI: Object to form.</p> <p>17 Q. And by "high value," let me -- let me</p> <p>18 clarify that. The data most attractive to an</p> <p>19 intruder?</p> <p>20 MR. BONI: Same objection. Joe, do</p> <p>21 you mean relative to his universe of data based</p> <p>22 backed websites or more in the absolute.</p> <p>23 Q. Rank them in order in your head and</p> <p>24 give me the first one.</p> <p>25 A. Yes. The first one is the internal</p>

<p style="text-align: right;">Page 81</p> <p>1 database that Wesley and I access internally</p> <p>2 that keeps records of all of the advertising</p> <p>3 fraud incidents that our tools have identified.</p> <p>4 Q. Is that database connected directly</p> <p>5 to any web server?</p> <p>6 A. No.</p> <p>7 Q. And it's a portion of that database</p> <p>8 that's extracted and then used to provide the</p> <p>9 query.ipensatori.com website; is that right?</p> <p>10 A. That's one use of a portion of the</p> <p>11 database.</p> <p>12 Q. That database, where is it stored?</p> <p>13 A. It's stored in Wesley's basement.</p> <p>14 Q. Is it stored in the same computer</p> <p>15 that runs the query.ipensatori.com website?</p> <p>16 A. No.</p> <p>17 Q. Why not?</p> <p>18 A. We believe that it is more likely to</p> <p>19 be secure if we store it on a separate computer.</p> <p>20 Well, really there are a variety of reasons of</p> <p>21 which that's just one.</p> <p>22 Q. Is the computer on which its stored</p> <p>23 connected to the Internet.</p> <p>24 A. It is.</p> <p>25 Q. Is it behind a firewall.</p>	<p style="text-align: right;">Page 83</p> <p>1 engine and advertising dominates my vitae. On</p> <p>2 the other hand, I'm proud of my work on</p> <p>3 information security. Some of it was original</p> <p>4 and important and set the stage for other's work</p> <p>5 that followed. And often information security</p> <p>6 work lays an important groundwork for some other</p> <p>7 activity such as understanding advertising fraud</p> <p>8 or understanding privacy problems. So they are</p> <p>9 definitely all interrelated.</p> <p>10 Q. When you say the "information</p> <p>11 security work," you're referring to the</p> <p>12 activities that we've discussed relating to</p> <p>13 security previously today?</p> <p>14 A. I think there also are quite a few</p> <p>15 that we haven't discussed.</p> <p>16 Q. Do any of them relate to gaining root</p> <p>17 access on a server connected to the Internet?</p> <p>18 A. I've largely been looking at aspects</p> <p>19 of information security other than gaining</p> <p>20 access at a root server level.</p> <p>21 Q. Has any of your research looked at</p> <p>22 gaining access to Internet connected servers on</p> <p>23 a root level?</p> <p>24 A. I certainly have written about</p> <p>25 gaining access to Internet connected devices on</p>
<p style="text-align: right;">Page 82</p> <p>1 A. I think broadly understood, it's</p> <p>2 behind a fire wall. It's behind some security</p> <p>3 apparatus that would colloquially be called a</p> <p>4 firewall.</p> <p>5 Q. Are you aware of any intrusion that</p> <p>6 has allowed access to that database of all of</p> <p>7 your research results with respect to</p> <p>8 advertising fraud?</p> <p>9 A. No.</p> <p>10 Q. What's the next most valuable</p> <p>11 database among those that you operate?</p> <p>12 MR. BONI: Object to form.</p> <p>13 A. Next most is probably the query tool</p> <p>14 which we've already discussed.</p> <p>15 Q. Turning back to Paragraph 1 of your</p> <p>16 report, you list information security as one of</p> <p>17 the areas of your research focus. Is research</p> <p>18 on information security a more or a less</p> <p>19 significant focus of your research than research</p> <p>20 on Internet advertising, search engines or</p> <p>21 privacy?</p> <p>22 MR. BONI: Object to form.</p> <p>23 A. There are multiple ways of thinking</p> <p>24 about that. In terms of my academic vitae, I</p> <p>25 think most people would say my work on search</p>	<p style="text-align: right;">Page 84</p> <p>1 a root level. Much of the Spyware and adware</p> <p>2 work entails exactly that, and I had some</p> <p>3 important work in that vein that I could tell</p> <p>4 you about. But those are end users devices</p> <p>5 rather than servers.</p> <p>6 Q. And gaining root access to an end</p> <p>7 user device is a different enterprise than</p> <p>8 gaining root access to an Internet connected</p> <p>9 server; is that right?</p> <p>10 A. Sometimes it is, and sometimes it</p> <p>11 isn't.</p> <p>12 Q. But as we've discussed, you're not</p> <p>13 aware of any instances in which executable</p> <p>14 Spyware has been executed on Internet-connected</p> <p>15 servers; is that right?</p> <p>16 A. I think I'm aware of such instances.</p> <p>17 Q. Were those -- who operated those</p> <p>18 servers in those instances?</p> <p>19 A. There have been a set of instances in</p> <p>20 which the servers operated by both banks and</p> <p>21 retailers as to credit card processing have been</p> <p>22 infiltrated by a set of devices that obtained</p> <p>23 either root level access or other access</p> <p>24 sufficient to obtain user's credit card numbers,</p> <p>25 expiration dates, billing addresses and zip</p>

Page 85

1 codes and so forth, the information that the
2 attackers sought in any event. And those had
3 been attacks perpetrated by obtaining access to
4 servers with the required security levels.

5 Q. So what you're saying is banks'
6 servers had been hacked into, and root level
7 access or similar access gained somehow passed?

8 A. Both banks and merchants.

9 Q. Can you recall an instance in which
10 you described the areas on which your research
11 focuses without including information security?

12 A. Yes.

13 Q. What instance is that?

14 A. I suspect the bio on HBS website
15 doesn't use the phrase "information security,"
16 although I'm confident that it discusses some of
17 my work in the area of information security.

18 Q. Why didn't it use the phrase
19 "information security"?

20 A. I'm not sure. I wrote it. So I
21 could have used that phrase had I wanted to. I
22 think I was attempting to fit more within the
23 area of research of my colleagues of this
24 hallway who are largely economists. And so I
25 was there structuring my focus to emphasize the

Page 86

1 economics aspects of my research and to somewhat
2 downplay the computer science aspects of the
3 research.

4 Q. Are you -- can you recall any other
5 instance in which you describe the areas on
6 which your research focuses without including
7 information security?

8 A. Sure.

9 Q. What instance is that?

10 A. I'm sure bios and converse
11 description and description of the speaker and
12 so forth, typically. Usually, any reference to
13 any information security.

14 Q. Why is that?

15 A. Usually, I find myself speaking to
16 advertisers or publishers or online business
17 people more generally, and they usually would
18 not be drawn to information security and such.
19 Even though it's important to what they do, they
20 wouldn't regard it as important or strategic,
21 and so presenting other aspects of my work would
22 be more likely to capture their interest and
23 attention.

24 Q. What other instances can you recall
25 in which you describe these areas on which your

Page 87

1 research focuses without including information
2 security?

3 A. I was recently evaluated for a
4 promotion by the Harvard Business School and had
5 to prepare a personal statement. I know that
6 the personal statement discussed my work in the
7 area of information security, but I doubt that
8 it used the phrase "information security."

9 Q. And the work in information security
10 that was discussed is the -- is the work on
11 spyware, advertising, privacy and so on that
12 we've discussed?

13 A. I think it includes those. There's
14 others also.

15 Q. Is there any work that you've done
16 that is more germane to Internet security --
17 strike that.

18 Is there any work that you've done
19 that is more germane to information security
20 than the work that we have discussed thus far
21 today?

22 A. I think there is actually.

23 Q. What work is that?

24 A. The first matter which I was retained
25 as an expert was the matter captioned National

Page 88

1 Football League versus I Crave TV, and that was
2 1999 or 2000. In that matter a Canadian company
3 was copying American network television to a
4 video format, not unlike YouTube except live
5 rather than recorded. My work in that case and
6 subsequent publications, comments to regulators
7 and so forth, were grounded in the remarkable
8 difficulty of securing that video content
9 against those who might further copy and wish to
10 access it in violation of applicable law.

11 Q. Anything else that is more germane to
12 information security than that which we have
13 discussed so far today?

14 A. Yes.

15 Q. What's that?

16 A. I had a set of projects as to
17 Internet filtering, attempting to determine what
18 websites were blocked by what commercial
19 filters, by what library filters, by what school
20 filters, by what national filters. In some
21 instances affecting entire countries. Well, in
22 a portion of that project, I wished to take
23 apart a series of commercial Internet filters in
24 order to determine what websites those filters
25 blocked. The list was installed on a server in

22 (Pages 85 to 88)

Page 89

1 m office, in my custody, and I needed to access
2 this data secured within the server, although
3 there were, in fact, some impediments to
4 accessing the data.

5 Q. And did you circumvent those
6 impediments?

7 A. I developed some methods to
8 circumvent a portion of the impediments. Other
9 impediments were more difficult, both for
10 technical and for legal reasons.

11 Q. Did this project result in
12 litigation?

13 A. One aspect of it did.

14 Q. Were you the plaintiff in that
15 litigation?

16 A. Yes.

17 Q. What was the claim that you made in
18 that litigation, and actually -- sorry, let me
19 ask. Was that the Edelman versus N2H2
20 litigation?

21 A. Yes.

22 Q. What was your claim as a plaintiff in
23 that litigation?

24 A. That was a declaratory judgment
25 action seeking guidance from the court as to

Page 90

1 whether it would be lawful for me to circumvent
2 an information system that constrained access to
3 a list of websites being filtered.

4 Q. What was the result of that
5 litigation?

6 A. The court refused to give any
7 guidance one way or the other.

8 Q. On what grounds did the court so
9 refuse?

10 A. I believe it was standing mootness.
11 Something procedural and early in that vein.

12 Q. Following the court's decision, did
13 you proceed with the project?

14 A. I abandoned the project, at least in
15 that respect.

16 Q. Who was your counsel in that
17 litigation?

18 A. The American Civil Liberties Union,
19 national office.

20 Q. Do you have any other areas of
21 research that are more germane to information
22 security than those we've already discussed?

23 A. Well, we've discussed spyware and
24 adware only to a limited extent, but that's
25 clearly important to information security,

Page 91

1 particularly as to the significant security
2 vulnerabilities that had given rise to the
3 installation of spyware and adware and about
4 which I have written in great detail.

5 Q. Anything else?

6 A. And my first publication on any
7 subject was a manual on how to use software
8 called Trumpet Winsock to connect to Net.com.
9 Net.com, being an early unlimited Internet
10 service provider, which I believe uniquely at
11 that time would provide unlimited Internet
12 access for \$20 a month. This was in an era of
13 monthly charges. I think I was about
14 15-years-old at the time and figured out how to
15 use Trumpet to connect to Netcom, which was
16 important at that point because Trumpet would
17 allow you to use Netscape and Udora and other
18 software that you might very much want to use.

19 Well, this was an information
20 security project because the Netcom service was
21 bundled with software called Net Cruiser which
22 was viewed as strategically significant from
23 Netcom corporation. I think mistakenly viewed.
24 They thought that it would be good for them to
25 provide your e-mail program and your web browser

Page 92

1 and your Internet access service. They were
2 mistaken. They would have been better off
3 providing only Internet access, but they didn't
4 know that.

5 So they wanted users to accept the
6 entire bundle. I wanted to use only a portion
7 of the bundle and to bring my own software at my
8 own expense for other services, and I determined
9 how to do that and wrote an article explaining
10 how to do it which raised significant questions
11 of security, frankly; namely, was their system
12 secure against people like me, and it turned out
13 that it was not.

14 Q. Was that a peer-reviewed article?

15 A. Well, it wasn't published in a
16 traditional journal. On the other hand, I
17 discussed it with genuine peers, people who
18 really knew this material, including the
19 software developers who wrote development
20 software and later the engineers at the Netcom
21 Corporation. So the relevant experts were
22 absolutely consulted and offered feedback and
23 opinions in great detail.

24 Q. Of your research, can you recall any
25 other research, other than that which we've

23 (Pages 89 to 92)

Page 93	Page 95
<p>1 discussed today, which is more germane to 2 information security than that which we've 3 discussed already?</p> <p>4 A. Yes. Here's another one that's more 5 germane than much of what we've discussed. 6 Yahoo operates an advertising service called 7 Right Media which has a very, very large 8 proportion of deceptive advertisements. Perhaps 9 30 percent or more of the Right Media 10 advertisements are deceptive by Yahoo's own 11 classification system, and here's how I know 12 that: As a Right Media publisher, a person 13 authorized to put Right Media advertisements 14 onto my website, I logged into the Right Media 15 interface and carefully excluded each of the 16 various categories of deceptive ads, 17 individually and in various combinations and 18 noted the proportion of advertisements that were 19 respectively excluded when I activated the 20 various category exclusions.</p> <p>21 In that way, I was able to obtain 22 from Yahoo's server the proportion of Yahoo's 23 advertisement that according to Yahoo's own 24 staff were deceptive and indeed unlawful. And 25 to demonstrate that a very sizable fraction of</p>	<p>1 Q. You nonetheless published it; is that 2 right?</p> <p>3 A. Yes.</p> <p>4 Q. Had you entered into any agreements 5 with Yahoo at the time that you published that 6 information?</p> <p>7 A. There was a standard click-through 8 agreement for which, frankly, I don't recall the 9 terms one way or another.</p> <p>10 Q. Do you recall whether there were 11 confidentiality terms?</p> <p>12 A. I don't recall one way or the other.</p> <p>13 Q. Did you check whether there were 14 confidentiality terms before publishing this 15 information?</p> <p>16 A. I think I thought about the legal 17 questions posed, and I expect that I would have 18 checked the confidentiality terms and resolved 19 the question to my satisfaction before 20 proceeding.</p> <p>21 Q. If there had been confidentiality 22 terms, would you have proceeded?</p> <p>23 A. I might have.</p> <p>24 Q. Why?</p> <p>25 A. I might have concluded that the terms</p>
Page 94	Page 96
<p>1 Yahoo's advertisements had this problem and then 2 to post those screen shots to my website along 3 with a discussion of the business, marketing and 4 legal questions posed, which prompted an 5 investigation by a state attorney general, 6 compelling Yahoo to change some of those 7 practices.</p> <p>8 Q. Do you consider your work on Right 9 Media an intrusion into a computer system?</p> <p>10 A. I believe Yahoo considered it an 11 intrusion into their computer system.</p> <p>12 Q. Do you consider it an intrusion into 13 a computer system?</p> <p>14 A. I'm not sure. I see both sides of 15 it.</p> <p>16 Q. Were you able through your intrusion 17 to gain access to any confidential Yahoo or 18 Right Media information?</p> <p>19 MR. BONI: Object to form. 20 Mischaracterizes the testimony.</p> <p>21 A. Yahoo took the position that the 22 information they provided to me in my capacity 23 as publisher was confidential and should not 24 have been presented on my website or disclosed 25 to anyone else.</p>	<p>1 didn't apply to the information that I was 2 publishing, didn't apply to this purpose, to 3 demonstrate unlawful conduct and Yahoo's 4 knowledge thereof, were contrary to public 5 policy, and therefore, unenforceable or for some 6 other reason were deficient or defective.</p> <p>7 Q. Do you remember what conclusion you 8 came to on those questions?</p> <p>9 A. The bottom line was that I should 10 publish the article, and I don't recall the 11 specific intermediary steps that took me to that 12 conclusion.</p> <p>13 Q. How is Right Media research germane 14 to information security?</p> <p>15 A. There was a set of information that 16 Yahoo wanted to keep away from public view and 17 away from, for example, the attorneys general 18 who ultimately investigated. They wanted their 19 own employees to be able to classify 20 advertisements, and they wanted publishers to 21 make informed decisions about which categories 22 of advertisements to accept. After all, 23 accepting the deceptive advertisements was 24 actually quite important to Yahoo's business 25 because they could make significant money from</p>

<p style="text-align: right;">Page 97</p> <p>1 their revenue share, their commission for 2 putting the deceptive advertisements onto 3 publishers' sites. 4 So they wanted publishers to be able 5 to accept the deceptive advertisements, but they 6 didn't want it to be required. Good publishers 7 would insist on excluding them. Well, Yahoo had 8 this set of complicated business objectives. 9 They wanted the ads classified in this way. 10 They wanted these people to see this 11 information, and these people not to see it. 12 And unfortunately for them, it was difficult to 13 thread the needle, that is, difficult to provide 14 exactly that information only to the people that 15 Yahoo wanted to provide it to because as I 16 demonstrated, one of the people who received the 17 information might elect to republish it to 18 Yahoo's detriment. 19 Q. Even in the face of a confidentiality 20 agreement requiring to the contrary? 21 A. Perhaps. 22 MR. GRATZ: Let's change the tape. 23 THE VIDEOGRAPHER: Here ends Tape 2. 24 Off the record 12:09 p.m. 25 (Brief recess.)</p>	<p style="text-align: right;">Page 99</p> <p>1 Q. And it wasn't ruled upon because the 2 case settled very shortly after it was filed; is 3 that right? 4 A. I don't think that's correct. 5 Q. Why wasn't it ruled on? 6 A. I think it wasn't ruled on because 7 WhenU withdrew the motion. 8 Q. Did WhenU withdraw the motion 9 contemporaneously or roughly contemporaneously 10 with a settlement of litigation? 11 A. No. I think the litigation continued 12 for more than a year thereafter, as I recall. 13 Well, I'm not sure. But in any event, if there 14 was a settlement, it was unrelated to the 15 withdrawal of the motion, to the best of my 16 knowledge. 17 Q. What was the allegation in that 18 contempt motion? 19 A. The allegation was that I disclosed 20 or otherwise used testimony that was given under 21 seal in writing an article on my website. 22 Q. In describing your expertise in 23 previous expert reports, have you ever omitted 24 to include any mention of information security? 25 A. Usually, in an expert report, I</p>
<p style="text-align: right;">Page 98</p> <p>1 THE VIDEOGRAPHER: Here begins Tape 2 No. 3 in today's deposition of Benjamin Edelman. 3 Back on the record, 12:13 p.m. 4 Q. Mr. Edelman, have you ever been the 5 subject of a contempt motion? 6 A. I have. 7 Q. Could you tell me about that? 8 A. This was a contempt motion brought by 9 WhenU, a spyware or adware company, depending on 10 who you ask, that alleged that I had violated a 11 portion of a protective order. 12 MR. GRATZ: We'll mark this as 13 Edelman 2. 14 (Document marked as Exhibit No. 2 for 15 identification.) 16 Q. You have before you what's been 17 marked as Edelman 2. Do you recognize this 18 document? 19 A. Yes. 20 Q. What is it? 21 A. It's WhenU's motion. 22 Q. Did WhenU settle -- excuse me. 23 Do you know whether this motion was 24 ruled upon? 25 A. It was not.</p>	<p style="text-align: right;">Page 100</p> <p>1 discuss the experience that is relevant to that 2 matter. Thinking about the most recent 3 instances in which I've served as an expert, I 4 don't think information security would have been 5 particularly relevant, and therefore, I probably 6 wouldn't have mentioned it. 7 Q. Do you consider Internet advertising 8 search engines and privacy particularly relevant 9 to the issues in this case? 10 A. Some more than others, but because 11 those are so central to the overwhelming 12 majority of my research, I mentioned them almost 13 as a matter of course, whether or not they're 14 relevant. 15 Q. And information security falls into a 16 different category? 17 MR. BONI: Object to form. 18 A. I think information security is 19 somewhat less prominent in my research. It 20 still permeates the research, but particularly 21 given widespread view that information security 22 is somehow less important or is best left to 23 technicians and is not of general significance, 24 it's something I'd be less likely to mention 25 unless it was specifically at the core of the</p>

<p style="text-align: right;">Page 101</p> <p>1 matter.</p> <p>2 MR. GRATZ: Let's mark this as</p> <p>3 Exhibit 3.</p> <p>4 (Document marked as Exhibit No. 3 for</p> <p>5 identification.)</p> <p>6 Q. Do you recognize this document?</p> <p>7 A. Yes.</p> <p>8 Q. Turning to -- actually what is this</p> <p>9 document?</p> <p>10 A. It begins with my expert report in a</p> <p>11 dispute between AOL, owner of Netscape, and</p> <p>12 Valueclick. It looks like it continues with a</p> <p>13 set of attachments. I'd need to flip through it</p> <p>14 all to be sure.</p> <p>15 Q. In your expert report in the</p> <p>16 Valueclick case, did you opine on issues of</p> <p>17 information security?</p> <p>18 A. I need to think back for a moment to</p> <p>19 remember what was at issue in that case.</p> <p>20 MR. BONI: Take your time and look at</p> <p>21 the report.</p> <p>22 A. I think Paragraph 11 purports to</p> <p>23 summarize my opinions, and as I recall, it does</p> <p>24 summarize my opinions. This is largely about</p> <p>25 the structure of online advertising markets and</p>	<p style="text-align: right;">Page 103</p> <p>1 information security in Paragraph 1.</p> <p>2 Q. Do you identify expertise and</p> <p>3 information security in any other portion of the</p> <p>4 description of your background and</p> <p>5 qualifications?</p> <p>6 A. I'm sure I attach my CV to the expert</p> <p>7 report as required by the applicable rules, and</p> <p>8 that does discuss information security via the</p> <p>9 various articles on that subject. The word</p> <p>10 secure, securing does appear in the title of an</p> <p>11 article in Paragraph 3. I think there's --</p> <p>12 there's discussion of information and security.</p> <p>13 Q. But it's not an important enough</p> <p>14 reason or interest to appear in the second</p> <p>15 sentence of Paragraph 1?</p> <p>16 A. I don't think that's the reason why</p> <p>17 it doesn't appear. It doesn't appear in the</p> <p>18 second sentence of Paragraph 1 because it's not</p> <p>19 as germane to the expert opinions presented in</p> <p>20 this expert report.</p> <p>21 Q. Whereas affiliate marketing is</p> <p>22 described there, but does not appear in</p> <p>23 Paragraph 1 of your report of this case; is that</p> <p>24 right?</p> <p>25 A. That's true. If we were to flip</p>
<p style="text-align: right;">Page 102</p> <p>1 the import of cookies in online advertising</p> <p>2 markets. There's significant technical analysis</p> <p>3 of whether or not the cookies work as</p> <p>4 instructed, whether or not the cookies are</p> <p>5 defective in some way, whether browsers</p> <p>6 correctly process the cookies. All questions</p> <p>7 very much grounded in whether information</p> <p>8 systems work in the way that they might have</p> <p>9 been expected to or whether they malfunction in</p> <p>10 some way. Whether that's information security</p> <p>11 or not, that's diagnosis and analysis of the</p> <p>12 functioning of information systems.</p> <p>13 Q. Would you say that your opinions in</p> <p>14 the Valueclick case have more or less to do with</p> <p>15 information security than your opinions in this</p> <p>16 case?</p> <p>17 A. Less.</p> <p>18 Q. And in describing your background and</p> <p>19 qualifications in the Valueclick case, you don't</p> <p>20 identify any expertise in information security;</p> <p>21 is that right?</p> <p>22 A. Let me check. Well, in Paragraph 1,</p> <p>23 for example, I discuss various aspects of</p> <p>24 advertising which is what was at issue in the</p> <p>25 case here, the Valueclick case. I don't discuss</p>	<p style="text-align: right;">Page 104</p> <p>1 through a variety of my expert reports, I think</p> <p>2 we'd find that, first, they copied this</p> <p>3 paragraph, and second, the end of that sentence</p> <p>4 especially tends to be customized a bit</p> <p>5 according to the context in which that report is</p> <p>6 being prepared.</p> <p>7 Q. Turning to your CV in this case,</p> <p>8 attached to your report, under experience you</p> <p>9 identify certain research interests. Do you see</p> <p>10 that?</p> <p>11 A. Yes.</p> <p>12 Q. Is information security listed among</p> <p>13 those research interests?</p> <p>14 A. Automated data collection actually is</p> <p>15 quite closely related to information security,</p> <p>16 but -- and information security permeates the</p> <p>17 other listed research interests, but it's not</p> <p>18 listed specifically by that name.</p> <p>19 Q. Have you ever provided consulting</p> <p>20 services or expert witness services with respect</p> <p>21 to subject matter as to which you did not</p> <p>22 consider yourself an expert?</p> <p>23 A. No.</p> <p>24 Q. Do you consider yourself an expert on</p> <p>25 the subject matter of computer security?</p>

<p style="text-align: right;">Page 105</p> <p>1 MR. BONI: Object to form.</p> <p>2 A. There are aspects of computer</p> <p>3 security on which I do consider myself an</p> <p>4 expert, and there are other aspects of computer</p> <p>5 security on which I don't consider myself an</p> <p>6 expert.</p> <p>7 Q. On which aspects of computer security</p> <p>8 do you consider yourself an expert?</p> <p>9 A. I consider myself an expert in areas</p> <p>10 of information security in a multiuser online</p> <p>11 information system, partial access to</p> <p>12 information, context in which some information</p> <p>13 is made available to some people but not others,</p> <p>14 information systems where some information is</p> <p>15 available to the general public without</p> <p>16 restriction or login.</p> <p>17 Conversely, at the other end of the</p> <p>18 spectrum, for example, as to the most technical</p> <p>19 aspects of hacking, finding the specific</p> <p>20 security defects that allowed an attacker to</p> <p>21 circumvent a security control, in general,</p> <p>22 that's something that I would have less to say</p> <p>23 about.</p> <p>24 Q. But you nonetheless consider yourself</p> <p>25 qualified to opine on the subject of computer</p>	<p style="text-align: right;">Page 107</p> <p>1 beyond what an ordinary computer professional</p> <p>2 would be likely to know.</p> <p>3 Q. Anything else?</p> <p>4 A. Sure. You know, there are many</p> <p>5 facets of information security. And we could go</p> <p>6 through the numerous specialized fields.</p> <p>7 Hardware security modules, specialized computer</p> <p>8 chips that provide security benefits, I'm</p> <p>9 familiar about them only incidentally from a</p> <p>10 particular single matter, but wouldn't consider</p> <p>11 myself an expert in hardware security modules in</p> <p>12 general.</p> <p>13 Q. How to conduct a penetration test of</p> <p>14 a system?</p> <p>15 A. Well, I wouldn't be so quick on that</p> <p>16 one. There are some systems for which I could</p> <p>17 appropriately design a penetration test. Some</p> <p>18 systems for which I have personally performed a</p> <p>19 penetration test and have achieved the</p> <p>20 penetration. So it all depends on the kind of</p> <p>21 system and the kind of testing that is under</p> <p>22 consideration.</p> <p>23 Q. Have you ever designed or performed a</p> <p>24 penetration test with respect to a system which</p> <p>25 stored digital books?</p>
<p style="text-align: right;">Page 106</p> <p>1 security generally?</p> <p>2 MR. BONI: Object to form. You can</p> <p>3 answer.</p> <p>4 A. I'm sure there are some questions of</p> <p>5 computer security that I wouldn't consider</p> <p>6 myself qualified to opine on, but as to the</p> <p>7 questions presented in this report, the</p> <p>8 questions on which I was asked to opine, I</p> <p>9 consider myself an expert for the purpose of</p> <p>10 those questions.</p> <p>11 Q. So you said you don't consider</p> <p>12 yourself an expert in sort of determining the</p> <p>13 means by which a particular intrusion occurred</p> <p>14 at the code level; is that right?</p> <p>15 MR. BONI: Object to form.</p> <p>16 A. I think that slightly</p> <p>17 mischaracterizes it, but it's probably</p> <p>18 satisfactory in many purposes.</p> <p>19 Q. In what other areas of computer</p> <p>20 security do you not consider yourself an expert?</p> <p>21 A. There are people with specialized</p> <p>22 expertise on physical security, vaults, tamper</p> <p>23 proof screws, tamper evidence seals. Some very</p> <p>24 important work, frankly. And I haven't written</p> <p>25 on that subject, haven't learned much about it</p>	<p style="text-align: right;">Page 108</p> <p>1 A. No.</p> <p>2 Q. Do you consider yourself an expert on</p> <p>3 the subject of online advertising?</p> <p>4 A. Yes.</p> <p>5 Q. Do you consider yourself an expert on</p> <p>6 the subject of advertising fraud?</p> <p>7 A. Yes.</p> <p>8 Q. Do you consider yourself an expert on</p> <p>9 the subject of spyware?</p> <p>10 A. Yes.</p> <p>11 Q. Do you consider yourself an expert on</p> <p>12 the subject of Spam?</p> <p>13 A. Some aspects of Spam more than</p> <p>14 others. I wouldn't be as unqualified with that</p> <p>15 one.</p> <p>16 Q. Do you consider yourself an expert on</p> <p>17 the subject of Internet filtering?</p> <p>18 A. Certainly there was a time when I was</p> <p>19 as close to that subject as anyone. Now I'm</p> <p>20 less sure, but there certainly are aspects of it</p> <p>21 where I put myself out as an expert.</p> <p>22 Q. Do you consider yourself an expert on</p> <p>23 the subject of geolocation?</p> <p>24 MR. BONI: Just to be fair, what it</p> <p>25 says in his CV is geolocation and targeting.</p>

Page 109

1 Q. Mr. Edelman, do you consider yourself
2 an expert on the subject of geolocation?

3 MR. BONI: Object to form.

4 A. There are aspects of geolocation on
5 which I have offered expert opinions. And
6 geolocation has changed somewhat since that time
7 and has become more complicated in multiple
8 respects, so there are portions of geolocation
9 on which I would not put myself out as an
10 expert.

11 Q. Do you have greater or lesser degree
12 of expertise in the area of geolocation than in
13 information security?

14 A. It's hard to make that comparison
15 because the term "information security" is just
16 such a broad term that encompasses so much.
17 There are portions of information security where
18 I have a much deeper understanding and a much
19 more current understanding than I have today of
20 geolocation.

21 Q. Do you consider yourself an expert on
22 the subject of privacy?

23 A. On some aspects of privacy. Privacy
24 also is quite broad. Probably even broader than
25 information security.

Page 110

1 Q. Do you consider yourself an expert on
2 the subject of online privacy?

3 A. Even there the term is quite broad
4 and comparable in breadth to information
5 security.

6 Q. What areas of online privacy do you
7 consider yourself an expert in?

8 A. I have expertise in data collection
9 from personal computers, especially Windows
10 computers, data collected by websites, data
11 collected through mechanisms in websites such as
12 HTML, JavaScript and Flash, methods of
13 determining forensically what data is collected
14 or has been collected, interpreting log files,
15 forensically interpreting historic records.
16 Those are the areas of privacy where I have done
17 the most work.

18 Q. Do you consider yourself an expert in
19 the subject of automated data collection?

20 A. Yes.

21 Q. Do you consider yourself an expert on
22 the subject of user interface design?

23 A. Some aspects of user interface
24 design.

25 Q. On what aspects of user interface

Page 111

1 design do you consider yourself an expert?

2 A. I think my greatest expertise is at
3 the intersection of user interface design and
4 consumer law, disclosures. I would make myself
5 less than expert on the ordinary questions of
6 ease of use and user friendliness, intuitiveness
7 and so forth.

8 Q. Of the areas of expertise that we've
9 just discussed, are there any in which you have
10 a greater degree of expertise than in the area
11 of information security?

12 A. The thing about these areas is that
13 they vary just dramatically in their breadth.
14 So you see on the list that we just discussed,
15 you see something like advertising fraud, where
16 I might have coined the term "online advertising
17 fraud." In any event, I think I have the single
18 best website on that subject on the whole
19 Internet. I'm the guy if you want to talk about
20 online advertising fraud. In part because it's
21 kind of a small subject, and at least in the
22 sense that not that many people are interested.
23 Maybe more people should be interested.

24 Conversely, for a huge subject like
25 privacy or information security, there are just

Page 112

1 many more subfields, and so it's like apples and
2 oranges to try to compare those two.

3 MR. GRATZ: Let's mark this as I
4 guess, we're on Exhibit 4.

5 (Document marked as Exhibit No. 4 for
6 identification.)

7 Q. We have before you what's been marked
8 as Exhibit 4. Do you recognize this document?

9 A. Yes.

10 Q. Is this a true and correct copy of an
11 expert report you submitted in Multnomah County
12 Public Library versus United States on October
13 15, 2001?

14 A. It seems to be.

15 Q. Turning to page 2, you say, "My
16 experience includes six years as an Internet web
17 server administrator, including operation of a
18 server ordinarily receiving more than 20,000
19 hits per day." Do you see that?

20 A. Yes.

21 Q. What server was that?

22 A. I think I must have been referring to
23 the main Berkman Center server as it stood at
24 that time.

25 Q. Were you the primary administrator of

28 (Pages 109 to 112)

<p style="text-align: right;">Page 113</p> <p>1 that server as of October 15, 2001?</p> <p>2 MR. BONI: Object to form.</p> <p>3 A. I'm not sure if October 15th, 2001 is</p> <p>4 the date of this report. Just take a moment to</p> <p>5 check that. I certainly was during a period on</p> <p>6 or about that time. I think my time as the</p> <p>7 primary administrator might have ended shortly</p> <p>8 before then.</p> <p>9 Q. Are you aware of any intrusions --</p> <p>10 actually strike that.</p> <p>11 The primary Berkman web server, are</p> <p>12 you referring to the web server at</p> <p>13 Ciber.law.Harvard.edu?</p> <p>14 A. That was the domain name that</p> <p>15 associated with the server that I administered.</p> <p>16 Q. Was that a data based-backed website?</p> <p>17 A. It was in part.</p> <p>18 Q. Are you aware of any intrusions that</p> <p>19 resulted in the disclosure of confidential</p> <p>20 information from that server when you were its</p> <p>21 administrator?</p> <p>22 A. There were intrusions into that</p> <p>23 server. I don't know what information, if any,</p> <p>24 was obtained during those intrusions.</p> <p>25 Q. What intrusions were those?</p>	<p style="text-align: right;">Page 115</p> <p>1 servers improved since 1995?</p> <p>2 A. I think the security of the servers</p> <p>3 has improved, although some confounding factors</p> <p>4 have caused reductions in security at the same</p> <p>5 time, such that I'm not sure on the whole</p> <p>6 information is a whole lot more secure than it</p> <p>7 was in that time period. Perhaps, it's less</p> <p>8 security.</p> <p>9 Q. And what confounding factors are</p> <p>10 those?</p> <p>11 A. Attackers have become significantly</p> <p>12 more skillful. Automatic attacking tools have</p> <p>13 become more widely used. Information sharing</p> <p>14 among attackers has become more common through</p> <p>15 specialized information sharing websites such</p> <p>16 that one defect can readily be known to others.</p> <p>17 Economic incentives to monetize stolen</p> <p>18 information have become significantly more</p> <p>19 widespread such that there's a much improved</p> <p>20 business model to attacking servers. Servers</p> <p>21 have become much more complicated with more</p> <p>22 software installed, more interconnections and</p> <p>23 more exposure to possible attacks.</p> <p>24 Q. Turning back to Exhibit 1 of your</p> <p>25 report, in the second sentence of Paragraph 2,</p>
<p style="text-align: right;">Page 114</p> <p>1 A. That was a Windows server, and it was</p> <p>2 subject to the -- I believe it was called SQL</p> <p>3 slammer, was an early worm. There were some</p> <p>4 other worms. It's hard to recall a decade later</p> <p>5 which one specifically managed to infect that</p> <p>6 server and which ones I successfully blocked.</p> <p>7 Q. But you don't recall any that</p> <p>8 resulted in the disclosure of confidential</p> <p>9 information?</p> <p>10 A. Well, if they did result in that</p> <p>11 disclosure, I don't think I learned about it. I</p> <p>12 don't know one way or the other. One of our</p> <p>13 main protection strategies, of course, was to</p> <p>14 try not to keep sensitive, high-risk,</p> <p>15 confidential information on that server for a</p> <p>16 variety of reasons, including the perceived</p> <p>17 vulnerabilities of the server and the fact that</p> <p>18 it was connected to the Internet in quite an</p> <p>19 exposed way.</p> <p>20 Q. Did your work as an Internet web</p> <p>21 server administrator begin in about 1995?</p> <p>22 A. Yes.</p> <p>23 Q. How old were you in 1995?</p> <p>24 A. I was 15.</p> <p>25 Q. Has the security of Internet web</p>	<p style="text-align: right;">Page 116</p> <p>1 you say "My technical experience includes</p> <p>2 efforts to verify the security of other</p> <p>3 programmers' code, including uncovering</p> <p>4 shortfalls in others' security systems." Is</p> <p>5 there anything referred to in that sentence that</p> <p>6 we haven't yet discussed today?</p> <p>7 A. Yes.</p> <p>8 Q. What's that?</p> <p>9 A. There are several instances in which</p> <p>10 I found significant security defect in others'</p> <p>11 codes. I can tell you about all of them that I</p> <p>12 remember, and you can check my CV for more. One</p> <p>13 that's particularly vivid was the WhenU software</p> <p>14 that we discussed on a couple of occasions. The</p> <p>15 WhenU software had a remote execution</p> <p>16 vulnerability; namely, it was possible for</p> <p>17 anyone to send a purported update to the WhenU</p> <p>18 spyware, adware application, which the WhenU</p> <p>19 application would then install on the user's</p> <p>20 computer with full administrative privileges,</p> <p>21 allowing the attacker to obtain complete control</p> <p>22 over the user's computer.</p> <p>23 I uncovered that, brought it to the</p> <p>24 attention of both WhenU and the general public,</p> <p>25 and subsequent to my report, it was corrected.</p>

<p style="text-align: right;">Page 117</p> <p>1 That's one. There are several other examples. 2 Q. Do any of those examples relate to 3 the security of code which is run on servers? 4 A. Well, much of this code is right at 5 the intersection of desktop computers and 6 servers. This was a vulnerability relating to 7 the way that the client connected to the server. 8 For example, they failed to use any 9 cryptographic verification, and so the 10 correction to the problem that I just described 11 required changes both to the client and to the 12 server. 13 Q. It wasn't a security defect in the 14 server that you found though; isn't that right? 15 A. It was a security defect in the 16 overall architecture that encompassed both the 17 server and the client. 18 Q. Did the defect that you identified 19 allow intrusion into the server? 20 A. I'm not sure. 21 Q. It did allow intrusion into the 22 client, in that one could install any software 23 one wanted and take complete control of the 24 client; is that right? 25 A. That much definitely could be done.</p>	<p style="text-align: right;">Page 119</p> <p>1 should -- would govern. 2 It was complicated and confusing. I 3 prefer to reread the underlying article which I 4 think offers a precise description of what went 5 wrong. Sitting here today, recalling an article 6 of half a decade ago, it's difficult for me to 7 summon the details with precision. 8 Q. Was that a situation in which there 9 was an intrusion that went past a designed 10 security system or a situation in which the 11 security settings through the security interface 12 didn't end up doing sort of what the user 13 intended? 14 MR. BONI: Object to form. You can 15 answer. 16 A. I think there are other possibilities 17 beyond the two in your question. I believe the 18 system didn't operate in the way that the 19 technical documentation said that it would 20 operate. I believe it didn't operate in the way 21 that a reasonable user would have expected it to 22 operate in light of the technical documentation 23 and the configuration screen. It's possible 24 that there's an engineer who knew that it would 25 operate this way because he designed it that</p>
<p style="text-align: right;">Page 118</p> <p>1 Q. Do you know of any other instances in 2 which you have verified or uncovered shortfalls 3 in the security of other security systems where 4 the security was protecting a server from 5 intrusion? 6 A. Google acquired a service called 7 JotSpot which suffered a defect that could be 8 styled as either a privacy defect or a security 9 defect. The result of the defect was that any 10 user could view the documents, even when the 11 author of those documents had instructed the 12 documents were to be kept private and secure 13 from other users. 14 Q. And that's in a situation where the 15 administrator of the particular wiki that was 16 involved had set all pages to be public; is that 17 right? 18 MR. BONI: Object to form. 19 A. As I recall, there were multiple 20 inconsistent settings areas, so you might set it 21 to be public in one place and private in another 22 place, and it looked from the user interface 23 like the private settings, the stricter of the 24 two settings should govern, when the fact of the 25 matter was that the looser of the two settings</p>	<p style="text-align: right;">Page 120</p> <p>1 way, and he knew that he designed it that way. 2 Nonetheless, I would say there was a 3 defect in the design, if that's how he designed 4 it, particularly in light of the technical 5 documentation. 6 Q. Was there any security measure that 7 needed to be circumvented in order to access the 8 information in the JotSpot situation? 9 A. I think the main tactic that an 10 attacker would need to utilize was to ask. It's 11 like the joke about God and the lottery ticket, 12 meet me halfway. Buy a ticket. You have to ask 13 for the private information in order to get it. 14 The main thing, protecting the private 15 information here was that no one would bother to 16 ask, and, therefore, no one would get it. 17 Q. And that was the security scheme that 18 was circumvented in that circumstance? 19 A. As I recall, the main request -- the 20 main circumvention technique was to ask for it. 21 To know of something obscure, to know of the 22 possible existence of something obscure and to 23 ask for it and receive the response. 24 Q. Are there any other instances of 25 uncovering shortfalls in server-based security</p>

Page 121	Page 123
<p>1 systems -- strike that.</p> <p>2 Are there any other instances in</p> <p>3 which you have uncovered shortfalls in the</p> <p>4 security systems that allowed intrusions into</p> <p>5 servers other than those which we've discussed</p> <p>6 so far?</p> <p>7 A. Yes. Here's one actually not</p> <p>8 reflected in my CV because it didn't result in a</p> <p>9 published article. It did result in a New York</p> <p>10 Times article. American Airlines had an</p> <p>11 internal website whereby documents were provided</p> <p>12 to flight attendants and ground staff, maybe one</p> <p>13 or the other, maybe both. Training documents,</p> <p>14 policy documents and so forth. It turned out</p> <p>15 thereto that the method of securing documents</p> <p>16 was importantly defective. Documents provided</p> <p>17 as plain text were appropriately secured with a</p> <p>18 user name and password, and I guess you could</p> <p>19 guess someone's user name and password to access</p> <p>20 them, but I didn't do that.</p> <p>21 In contrast, documents provided as</p> <p>22 attachments were available to anyone who</p> <p>23 happened to guess the attachment number, and the</p> <p>24 numbers were sequential beginning with one and</p> <p>25 continuing to some maximum, such that it was</p>	<p>1 Q. Do you know of any techniques that</p> <p>2 can be used to avoid such an attack?</p> <p>3 A. Yes.</p> <p>4 Q. What techniques are those?</p> <p>5 A. One could avoid publishing these</p> <p>6 files with predictable file names. Instead of</p> <p>7 using numbers like 1.PDF, you could have a</p> <p>8 lengthy number too long to guess. You could</p> <p>9 restrict access to -- even to these raw binary</p> <p>10 files, restrict access to those users who have,</p> <p>11 in fact, entered a user name and password.</p> <p>12 That's a little bit more complicated but</p> <p>13 certainly doable for an engineer who needs to.</p> <p>14 Q. And those are two separate methods.</p> <p>15 One would be choosing file names that are</p> <p>16 predicable. Another would be sort of requiring</p> <p>17 a user name and password before providing access</p> <p>18 to the files?</p> <p>19 A. There are some other methods also.</p> <p>20 Certainly it could be done for someone who</p> <p>21 recognized the vulnerability and elected to take</p> <p>22 steps to defend against it.</p> <p>23 Q. Are there any other instances in</p> <p>24 which you have uncovered shortfalls in the</p> <p>25 security of servers against intrusion other than</p>
Page 122	Page 124
<p>1 quite straightforward to download all of them,</p> <p>2 which I did.</p> <p>3 And then I read the documents in</p> <p>4 sequence from one to the last and found some</p> <p>5 that were quite embarrassing to the company, in</p> <p>6 fact, which I provided to the New York Times</p> <p>7 which wrote an article about them.</p> <p>8 Q. Do you think that what you did was an</p> <p>9 intrusion into American Airlines systems?</p> <p>10 A. I'm not sure. Actually, I found the</p> <p>11 articles using Google. I found the first one</p> <p>12 using Google because Google had previously found</p> <p>13 the very same PDF attachments and directed me to</p> <p>14 one of them as I was attempting to find records</p> <p>15 of a relevant American Airlines policy. So if</p> <p>16 it was an intrusion, Google did it first, and</p> <p>17 then I identified the pattern and continued it</p> <p>18 from there.</p> <p>19 Q. That was because the files at issue</p> <p>20 were publicly available on the Internet. All</p> <p>21 one had to do was type in the URL, and they</p> <p>22 would come up; is that right? If one knew the</p> <p>23 URL?</p> <p>24 A. If one knew the URL, they were</p> <p>25 available upon request.</p>	<p>1 those we've discussed?</p> <p>2 A. We discussed Buy.com previously.</p> <p>3 Q. Yes.</p> <p>4 A. That was very much in the same vein</p> <p>5 as the American Airlines example just discussed.</p> <p>6 Namely, the name, address and phone number were</p> <p>7 provided on UPS prepaid shipping labels, which</p> <p>8 were posted in some binary format like a gift or</p> <p>9 a PDF or a PNG with sequential numbers, so that</p> <p>10 by guessing numbers, Buy.com/returns/17 dot,</p> <p>11 yes, you'd be able to see the seventeenth return</p> <p>12 and thereby obtain that information directly</p> <p>13 from the Buy.com server, again, without any</p> <p>14 defect in any client software.</p> <p>15 Q. That would be avoided by choosing</p> <p>16 unpredictable file names or the other methods</p> <p>17 which we've discussed?</p> <p>18 A. Yes.</p> <p>19 Q. Anything else?</p> <p>20 A. The I Crave TV case which we've</p> <p>21 discussed already.</p> <p>22 Q. And in what sense was that a -- why</p> <p>23 don't we discuss that in more detail. Anything</p> <p>24 else?</p> <p>25 A. I think there probably are more. I</p>

Page 125	Page 127
<p>1 have never thought of myself as limited to 2 client-side security. I've certainly always 3 been interested in server security. It's just 4 that there were other people doing server-side 5 security, and so I was better able to 6 distinguish myself in the realm client-side 7 security which others weren't focused on. But I 8 think there are other publications. I could 9 flip through my whole CV line by line to try to 10 identify some more for you. 11 Q. Do any others come to mind? 12 MR. BONI: Do you want him to look 13 through his CV? 14 Q. You're welcome to look through your 15 CV? 16 A. Sure, I'll take a minute and look. 17 Okay, here we go, the second item 18 under the heading "website writings" on page 3 19 of the CV is entitled "Hack-based 20 Cookie-Stuffing by Bannertracker-script." 21 Q. And what's that? 22 A. So this is an article very much at 23 the intersection of security and advertising, 24 advertising fraud. Bannertracker-script is the 25 controlling domain name used by a set of hackers</p>	<p>1 to their own code and use their own code to 2 create the invisible eye frame window that loads 3 Amazon that makes the putative referral. 4 Q. And this is through an exploit in 5 software called vBulletin? 6 A. That's my understanding. 7 Q. Anything else? Actually let me ask 8 this: Did you analyze that exploit in 9 vBulletin? 10 A. I didn't analyze the exploit. I was 11 able to determine forensically from the location 12 of the insertion and from others discussing this 13 method of insertion that it had been perpetrated 14 by exploit. It was clear from the circumstance, 15 the same insertion on hundreds, even thousands 16 of unrelated websites, that it had to be an 17 exploit, and I quickly confirmed to my 18 satisfaction that it was. 19 Q. Do you know whether any confidential 20 information from these bulletin board sites was 21 compromised as a result of this exploit? 22 A. There were some losses to the 23 bulletin board sites. The bulletin board sites 24 began to load more slowly for users. Users had 25 to waste bandwidth, and Amazon, of course, pays</p>
Page 126	Page 128
<p>1 who attack discussion board sites, online 2 bulletin boards, to insert their code into the 3 bottom of the bulletin board site, and having 4 inserted their code, they then perpetrate 5 advertising fraud, primarily against Amazon, 6 claiming to have referred users to Amazon, such 7 that if users make a purchase from Amazon within 8 the 24 hours after the putative referral, Amazon 9 will pay a commission of as much as 8 percent to 10 the putative referrer. 11 Q. And this is a way in which sites 12 which display advertisements from certain ad 13 networks may result in the unintended data going 14 to users? 15 A. Not at all of. This is a genuine 16 hack. The perpetrators of this hack identify a 17 defect in the code that allows them to put their 18 code onto the fixed-in websites without any 19 permission whatsoever. It's not via an ad 20 network. It's via a security exploit. I 21 reserve the word "hack" typically for that kind 22 of circumstance. So they exploit a defect in 23 the victims's web server or application level 24 server sitting on top of the web server and use 25 that defect to install the JavaScript reference</p>	<p>1 significant funds. But the main losses here are 2 not in user privacy. The losses here are 3 measured in dollars actually, dollars taken out 4 of the pockets of Amazon shareholders. 5 Q. So the answer to that question is, 6 no, you don't know of any confidential 7 information having been taken as a result of 8 this exploit? 9 A. I think what was taken was money and 10 bandwidth but not information. 11 Q. In the next sentence of paragraph -- 12 little bit lower down in Paragraph 2, you say, 13 "For example, I have personally uncovered 14 multiple Google privacy flaws, including 15 improper data collection by Google Toolbar as 16 well as improper data distribution by Google 17 JotSpot." Do you see that? 18 A. Yes. 19 Q. Do you claim to have uncovered any 20 Google privacy flaws other than the two you 21 claim to have uncovered in this sentence? 22 A. It's possible that there are some 23 more Google privacy flaws that I know about and 24 could be taking credit for, but I can't remember 25 any sitting here today. I don't think I've</p>

Page 129	Page 131
<p>1 written about any others. I think there 2 probably are some more. There probably are some 3 that I know about that I haven't written about 4 or have disclosed only peripherally in 5 presentations or otherwise. 6 Q. Do any come to mind? 7 A. No. 8 MR. GRATZ: We'll mark as Exhibit 5. 9 (Document marked as Exhibit No. 5 for 10 identification.) 11 Q. Do you recognize Exhibit 5? 12 A. Yes. 13 Q. What is it? 14 A. This is a article published on my 15 website in January 2010. 16 Q. Is this the research referred to by 17 the phrase "improper data collection" by Google 18 Toolbar in Paragraph 2 of your report? 19 A. Yes. 20 Q. What methodology did you use to reach 21 these results? 22 A. I tested Google Toolbar forensically 23 using a virtual computer, using a set of virtual 24 computers in my home office. 25 Q. And your research found that Google</p>	<p>1 thing than disabling the Google Toolbar only for 2 this window that you've been tracking? 3 A. You're right, that's a different 4 thing, and, in fact, there's yet another example 5 on page 3 that's another different thing. 6 Q. These -- and all of these settings 7 properly take effect after the user restarts 8 their browser; is that right? 9 A. That's right. 10 Q. But what you found was that these 11 settings didn't properly take effect until the 12 user restarted their browser; is that right? 13 A. That's true, with the additional 14 concern that as to the first example, the whole 15 purpose was for it to take effect immediately 16 for the current browsing session. By the terms 17 of the user's instruction, it was to take effect 18 only for that session and for no other, and so 19 restarting your browser was supposed to 20 terminate it, meaning the feature was completely 21 defective in the mechanism presented in the 22 first section. 23 MR. GRATZ: We'll mark this document 24 as Exhibit 6. 25 (Document marked Exhibit No. 6 for</p>
Page 130	Page 132
<p>1 Toolbar -- certain features of Google Toolbar 2 continued to operate after the feature had been 3 turned off and the toolbar had been hidden, at 4 least until the user restarted the browser; is 5 that right? 6 A. That's right. 7 Q. And if the user restarted their 8 browser, than the settings would take effect; is 9 that right? 10 A. When the user restarted his or her 11 web browser, the disabling which had always been 12 described as only for this window would by its 13 term expire, and, therefore, the feature would 14 be re-enabled, the toolbar would reappear, and 15 the user would rightly expect that the tracking 16 would continue. 17 Q. Does your research discuss only the 18 disable only for this window feature? 19 A. That's right. 20 Q. Turning to the second page of Exhibit 21 5, it says, "Google Toolbar continues tracking 22 browsing even when users disable the toolbar via 23 manage add-ons." Do you see that? 24 A. Yes. 25 Q. Is that the same thing or a different</p>	<p>1 identification.) 2 Q. Turning back to Exhibit 5 for a 3 moment, this is a blog post from January 26, 4 2010; is that right? 5 A. Yes. 6 Q. Turning to Exhibit 6, this is also a 7 blog post from January 26 of 2010 on a blog 8 called Search Engine Land; is that right? 9 A. Yes. 10 Q. This includes a statement from Google 11 responding to your blog post; is that right? 12 A. Yes. 13 Q. The last sentence of that statement 14 is "A fix that doesn't require a browser restart 15 is now available on www.Google.com/toolbar and 16 in an automatic update to Google Toolbar that we 17 are starting tomorrow." Is that right? 18 A. That's what it says. 19 Q. Do you know whether that was a true 20 statement as of January 26, 2010? 21 A. I agree that effective roughly 24 22 hours thereafter the Google Toolbar began to 23 update itself to a version that no longer had 24 the defects described in my article. 25 Q. The next sentence, and this is not</p>

Page 133	Page 135
<p>1 from Google's statement, but from the author of</p> <p>2 the blog post on Search Engine Land, says, "I</p> <p>3 wonder if Ben Edelman knew about restarting I.E.</p> <p>4 would fix the issue and left it out." When you</p> <p>5 wrote Exhibit 5, did you know that restarting</p> <p>6 Internet Explorer would cause the settings to</p> <p>7 take effect?</p> <p>8 A. I think this misunderstands -- the</p> <p>9 Barry Schwartz article misunderstands the scope</p> <p>10 of the problem, particularly as to the first</p> <p>11 section of my article.</p> <p>12 Q. Turning your attention to the</p> <p>13 sections of your article other than the first</p> <p>14 section, were you aware at the time you</p> <p>15 published Exhibit 5 that restarting the browser</p> <p>16 would cause the settings to take effect?</p> <p>17 A. Well, when I published the article,</p> <p>18 it included the first and second sections, and</p> <p>19 the third section, captioned, "Google Toolbar</p> <p>20 Continues Tracking Browsing When Users Disable</p> <p>21 the Toolbar Via Right Click," was added late on</p> <p>22 the night of January 26th, and it even includes</p> <p>23 a parenthetical and italics to that effect. So</p> <p>24 we should be limiting ourselves to the first two</p> <p>25 sections for purposes of discussing what I knew</p>	<p>1 data collection by Google Toolbar?</p> <p>2 A. Well, an interesting twist about</p> <p>3 Exhibit 5 is that I know Google knew about the</p> <p>4 problem for more than a month before I wrote it</p> <p>5 up on my website.</p> <p>6 Q. How do you know that?</p> <p>7 A. A state attorney general told me,</p> <p>8 staff of a state attorney general.</p> <p>9 Q. What's that person's name?</p> <p>10 A. I can't recall.</p> <p>11 Q. What state was it?</p> <p>12 A. I don't recall.</p> <p>13 Q. About when did they make that</p> <p>14 statement to you?</p> <p>15 A. I was at a meeting of staff of state</p> <p>16 attorneys general in Florida, somewhere in Miami</p> <p>17 vicinity, and someone told me that.</p> <p>18 Q. When was that roughly?</p> <p>19 A. It was in the same winter when I</p> <p>20 published this article, so it must have been</p> <p>21 February or March 2010.</p> <p>22 Q. Was it before or did -- so it was</p> <p>23 after the publication of this article?</p> <p>24 A. That's right.</p> <p>25 Q. And what basis did the person who</p>
Page 134	Page 136
<p>1 when I published the article.</p> <p>2 Q. Let me be -- let me be very precise</p> <p>3 as to the time. When you published the section</p> <p>4 of Exhibit 5 marked "Google Toolbar Continues</p> <p>5 Tracking Browsing Even When Users Disable the</p> <p>6 Toolbar Via Manage Add-Ons." Do you see that</p> <p>7 portion?</p> <p>8 A. Yes.</p> <p>9 Q. Did you know that that disabling</p> <p>10 setting took effect when the user restarted</p> <p>11 their browser?</p> <p>12 A. Well, the article right now as I'm</p> <p>13 looking at it, page 3, says -- not only says</p> <p>14 that I knew, but alerts readers to that very</p> <p>15 fact in the paragraph that begins "In my tests,"</p> <p>16 towards the top of page 3. It says exactly</p> <p>17 that. Maybe Barry Schwartz didn't notice that</p> <p>18 paragraph of the article.</p> <p>19 Q. Are you aware of any intrusion to</p> <p>20 Google's servers related to the issue set forth</p> <p>21 in Exhibit 5?</p> <p>22 A. This problem isn't about intrusion</p> <p>23 into Google's servers.</p> <p>24 Q. Other than what's described in</p> <p>25 Exhibit 5, have you found any other improper</p>	<p>1 told you this have for making that statement?</p> <p>2 MR. BONI: Object to form.</p> <p>3 A. It purported to be personal</p> <p>4 knowledge.</p> <p>5 Q. Personal knowledge of that?</p> <p>6 MR. BONI: Object to form.</p> <p>7 A. Personal knowledge as conveyed to me</p> <p>8 of some sort of a dispute between Google and</p> <p>9 Microsoft pursuant to a Microsoft antitrust</p> <p>10 consent decree and the ongoing oversight</p> <p>11 therefrom; wherein, Google complained that</p> <p>12 Microsoft was doing this, and Microsoft</p> <p>13 complained that Google was doing that. And the</p> <p>14 state attorney general staff person was on a</p> <p>15 phone call where all of that was discussed and</p> <p>16 perhaps an e-mail exchange. In some other way</p> <p>17 it was all made known to this person.</p> <p>18 Q. Do you think that person was telling</p> <p>19 the truth?</p> <p>20 A. I do. I wish I knew the person's</p> <p>21 name. Unfortunately, it was all in, you know, a</p> <p>22 reception or other social function at that</p> <p>23 event.</p> <p>24 Q. Turning back to Paragraph 2 of your</p> <p>25 report, you mention improper data distribution</p>

<p style="text-align: right;">Page 137</p> <p>1 by Google JotSpot. Do you see that?</p> <p>2 A. Yes.</p> <p>3 MR. GRATZ: I'd like to mark this as</p> <p>4 Exhibit 7.</p> <p>5 (Document marked as Exhibit No. 7 for</p> <p>6 identification.)</p> <p>7 Q. You have before you what's been</p> <p>8 marked as Exhibit 7. Do you recognize this as</p> <p>9 an October 30th, 2008 blog post by you?</p> <p>10 A. I don't recall the date, but maybe</p> <p>11 if --</p> <p>12 MR. BONI: There's a different --</p> <p>13 there's a different date on that.</p> <p>14 A. That's the date on the last page. I</p> <p>15 think that's probably correct.</p> <p>16 Q. Is this the research referred to by</p> <p>17 the phrase "improper data collection" by Google?</p> <p>18 Excuse me.</p> <p>19 Is this the research referred to by</p> <p>20 the phrase "improper data distribution" by</p> <p>21 Google JotSpot in your report?</p> <p>22 A. This is what I had in mind, yes.</p> <p>23 Q. What methodology did you use to reach</p> <p>24 the results set forth in Exhibit 7?</p> <p>25 A. Direct hands-on testing and screen</p>	<p style="text-align: right;">Page 139</p> <p>1 third grader could do it also.</p> <p>2 MR. GRATZ: Mark this as Exhibit 8.</p> <p>3 (Document marked as Exhibit No. 8 for</p> <p>4 identification.)</p> <p>5 Q. Do you recognize what's been placed</p> <p>6 before you as Exhibit 8?</p> <p>7 A. I don't really recall it one way or</p> <p>8 the other, but I can see what it must be.</p> <p>9 Q. What is it?</p> <p>10 A. It seems to be news coverage of the</p> <p>11 Google JotSpot article that I wrote.</p> <p>12 Q. Turning to the second page of Exhibit</p> <p>13 8, under the screen shot, there's a statement</p> <p>14 from a Google spokesman; do you see that?</p> <p>15 A. Yes.</p> <p>16 Q. Could you read that statement,</p> <p>17 please.</p> <p>18 A. This is a statement from a Google</p> <p>19 spokesperson, giving his view of the issue. He</p> <p>20 says, "This is not a security issue. The</p> <p>21 information in these wikis is accessible because</p> <p>22 they have been set to public on the site</p> <p>23 permissions page. Users are always in control</p> <p>24 of the information they share. If wikis are set</p> <p>25 to private, no information will be publically</p>
<p style="text-align: right;">Page 138</p> <p>1 shot evidence.</p> <p>2 Q. You used a web browser; is that</p> <p>3 right?</p> <p>4 A. A web browser, a screen shot tool,</p> <p>5 potentially a packet sniffer. I don't recall.</p> <p>6 Q. What is a packet sniffer?</p> <p>7 A. A packet sniffer is a specialized</p> <p>8 tool for reviewing and confirming all data sent</p> <p>9 over a network connection.</p> <p>10 Q. Did you use a packet sniffer in</p> <p>11 conducting the research set forth in Exhibit 7?</p> <p>12 A. I often run one in the background</p> <p>13 while doing this kind of test. Let me skim</p> <p>14 through the article and see whether there's any</p> <p>15 discussion of the fruits of that methodology.</p> <p>16 Okay, there's no discussion of use a</p> <p>17 packet sniffer. I believe I probably ran one</p> <p>18 anyway, checked its output, found that there was</p> <p>19 nothing notable in the packet sniffer output,</p> <p>20 above and beyond what the screen shot showed,</p> <p>21 and, therefore, had no need to mention it.</p> <p>22 Q. Were there any other elements of your</p> <p>23 methodology?</p> <p>24 A. No. I think what's beautiful about</p> <p>25 this article is it's just so simple, a typical</p>	<p style="text-align: right;">Page 140</p> <p>1 accessible."</p> <p>2 Q. Was it true that the information in</p> <p>3 the wikis which were the subject of your article</p> <p>4 had been set to public in the site permissions</p> <p>5 page?</p> <p>6 A. I think it may not be as simple as</p> <p>7 that. I think there was an import from one</p> <p>8 JotSpot system to another as part of the</p> <p>9 acquisition, and something might have been</p> <p>10 changed during the import. I definitely think</p> <p>11 this engineer is only telling part of the story.</p> <p>12 Q. Do you know what the other parts of</p> <p>13 the story are?</p> <p>14 A. I think it's along the lines just</p> <p>15 described, that some options had been added,</p> <p>16 something had been converted, perhaps subsequent</p> <p>17 to the acquisition or in some other upgrade.</p> <p>18 And so things that had started out more private</p> <p>19 had become less private over time.</p> <p>20 Q. Were you aware that the wikis that</p> <p>21 were the subject of your blog post had been set</p> <p>22 to public on their site permissions page?</p> <p>23 MR. BONI: Object to form.</p> <p>24 A. First had been set is nicely in the</p> <p>25 passive voice. Who did the setting is exactly</p>

Page 141

1 the question. Whether it was the site
2 administrator or Google who set it that way.
3 But I think, yes, the article discusses that and
4 discusses the contrary and inconsistent
5 statements, inconsistencies between this screen
6 and that screen and the help file all discussed
7 in the body of Exhibit 7 as it is before us.

8 Q. Google fixed this issue within 48
9 hours; is that right?

10 A. That wasn't my recollection actually.

11 Q. How long did it take for Google to
12 fix this issue, in your recollection?

13 A. I thought Google's initial position
14 was that everything was working perfectly.
15 Nothing at all was wrong, and that's consistent
16 with the quote from the Google spokesman in the
17 CNET article. I don't really recall
18 specifically.

19 Q. Turning to the last paragraph of
20 Exhibit 7, does this refresh your recollection
21 as to the time that it took to remedy this
22 issue?

23 A. That suggests it took about a week
24 after I first notified Google. I had thought it
25 took longer than that. But this paragraph seems

Page 142

1 to indicate that a week is about as long as it
2 took.

3 Q. This was a week after you sent
4 notification to Google, but as of the same day
5 you posted this publicly; is that right?

6 MR. BONI: Object to form.

7 A. That's what this says. It's possible
8 that my last paragraph here is inaccurate, that
9 in some sense the problem lingered. I just --
10 I just don't know. But if the paragraph of my
11 article is correct, then it was fixed the same
12 day that I posted the article. Although it
13 wasn't fixed during the intervening week when I
14 hadn't posted the article. When Google was just
15 on notice of the problem, but there was no
16 public concern and no article neatly laying it
17 out, Google dragged its feet a little bit. Then
18 when I twisted their arm, they finally fixed it
19 that same day.

20 MR. GRATZ: We can change the tape.

21 THE VIDEOGRAPHER: Here ends Tape
22 No. 3. Off the record 1:15 p.m.

23 (Recessed for lunch.)

24 THE VIDEOGRAPHER: Here begins Tape
25 No. 4 in today's deposition of Benjamin Edelman.

Page 143

1 Back on the record 2:13 p.m.

2 Q. Turning your attention to the final
3 paragraph of Paragraph -- strike that.

4 Turning your attention to the final
5 sentence in Paragraph 2 of Exhibit 1, it says,
6 "I also found and demonstrated to a court's
7 satisfaction that an early online video service,
8 iCraveTV, had failed to secure video contents in
9 the way that it had previously represented to
10 that court." Do you see that?

11 A. Yes.

12 MR. GRATZ: I'd like to mark this as
13 Exhibit 9.

14 (Documents marked as Exhibit Nos. 9
15 and 10 for identification.)

16 Q. You have before you what has been
17 marked as Exhibit 9 and 10. Do you recognize
18 these documents?

19 A. Yes.

20 Q. Is Exhibit 9 your initial declaration
21 in a case titled "National Football League
22 versus TVRadioNow Corporation"?

23 A. Yes.

24 Q. And is Exhibit 10 a supplemental
25 declaration that you submitted in that case?

Page 144

1 A. Yes.

2 Q. Are these expert declarations?

3 A. Yes.

4 Q. You are an expert retained by the
5 plaintiffs in that case; is that right?

6 A. Yes.

7 Q. And these declarations were submitted
8 in January and February of the year 2000
9 respectively; is that right?

10 A. Yes.

11 Q. What opinions did you render?

12 A. I could take a moment to refresh my
13 recollection of these documents of 12 years ago,
14 but generally I offered the opinion that
15 iCraveTV security systems were not properly
16 designed to limit access to Canadian users only,
17 and, that, in fact, significant American and
18 other users could access and were accessing the
19 video contents that was supposed to be limited
20 to Canadians only.

21 Q. So the system was designed based on
22 the IP address of the user to either grant or
23 deny access based on whether that user was
24 coming from an IP address associated with the
25 United States; is that right?

36 (Pages 141 to 144)

<p style="text-align: right;">Page 145</p> <p>1 A. Well, there were a series of security 2 systems. You described a portion of one of the 3 security systems. 4 Q. What were the other security systems 5 about which you rendered opinions in Exhibits 9 6 and 10? 7 A. Some of the security systems predated 8 my opinions, and I believe are not discussed 9 here. There was one that was grounded in typing 10 in an area code. If you knew a Canadian area 11 code, that would prove that you were Canadian. 12 I don't know that I had to offer an opinion as 13 to the defects of that security, but that was 14 one that was also an issue. 15 You describe restrictions based on 16 the IP address which is true but only in part. 17 That was a restriction on access to a portion of 18 the web server; whereas, what was actually 19 desired was the video which was provided by a 20 different server; namely, a streaming video 21 server from a company called Real Networks, 22 which didn't have any such access restriction. 23 And so it was possible completely to circumvent 24 the IP address filter that you just described. 25 Q. Did your opinions in the National</p>	<p style="text-align: right;">Page 147</p> <p>1 users who, in fact, have done so. There might 2 have been students at Harvard College, and we 3 could even identify them by name from 4 information present within the defendant's log 5 files. I don't recall whether we identified any 6 of them by names in the context of the 7 declaration. We might have thought that was a 8 much notch too personal, but we could, and I 9 think that might have come out in the oral 10 testimony, if not in the deposition. 11 Q. This was a system that had both a web 12 server and a media server or a set of web 13 servers instead of media servers; is that right? 14 A. That's right. 15 Q. And on the web servers, there was an 16 attempt to restrict access to users outside the 17 United States; is that right? 18 A. That's right. 19 Q. And on the media servers, there was 20 no such attempt; is that right? 21 A. That's true. 22 Q. Were the log files you were looking 23 at log files from the media servers? 24 A. I believe I looked at both sets of 25 log files.</p>
<p style="text-align: right;">Page 146</p> <p>1 Football League case relate to the area 2 code-based security system? 3 MR. BONI: Object to form. 4 A. I know that I formed opinions. 5 Whether those opinions are expressed in this 6 declaration, I'd need to read through both of 7 the declarations to say for sure. My opinion 8 was and is that the area code system didn't work 9 very well for reasons that are probably 10 apparent, and I might have mentioned that in a 11 paragraph, or that might have gotten deleted 12 when the defendants abandoned that system. 13 Q. So the opinion that you were 14 rendering in this case is that users from the 15 United States were, in fact, able to access 16 television programming where the system had been 17 attempted to be designed to prevent users in the 18 United States from accessing that program; is 19 that right? 20 A. I demonstrated both the users were 21 able to and that they, in fact, and did so in 22 significant quantities. 23 Q. Did you demonstrate anything else in 24 these reports? 25 A. I gave specific examples of specific</p>	<p style="text-align: right;">Page 148</p> <p>1 Q. Did you find that the IP -- what is 2 IP geolocation? 3 A. IP geolocation is a set of systems 4 that convert an IP address to a geographic 5 location or a likely geographic location, an 6 inference as to geographic location. 7 Q. In your report did you find errors in 8 the IP geolocation database used by the 9 defendant in this case, in Exhibits 9 and 10? 10 A. I believe I did find and discuss some 11 errors. 12 Q. Did you also find that users from the 13 United States had, in fact, accessed the media 14 server? 15 A. I found that users from the United 16 States could access the media server. I believe 17 there was evidence that they actually had done 18 so, including discussions on web pages directing 19 users as to how to do so. 20 Q. Were those people hackers? 21 MR. BONI: Object to form. 22 A. It depends on the definition of the 23 word "hackers," but on some definitions 24 including reasonable definitions, they were. 25 Q. In that they were gaining access to a</p>

37 (Pages 145 to 148)

<p style="text-align: right;">Page 149</p> <p>1 system when they knew that they weren't supposed 2 to have access to it? 3 A. Right. 4 Q. They weren't -- they didn't have the 5 root access to the system; is that right? 6 A. They didn't even want root access. 7 All they wanted was to watch the video content 8 that was available via this much easier 9 mechanism. 10 Q. And this much easier mechanism more 11 or less amounted to directing their software to 12 a particular address which held the video 13 content in an unprotected form; is that right? 14 A. Yes. 15 Q. Other than that, are you aware of any 16 intrusion into iCraveTV's servers relating to 17 the issues discussed in Exhibits 9 and 10? 18 A. Immediately after that, they faced an 19 injunction requiring them to shut down the 20 servers, and at that point, I don't think it 21 would have been possible to intrude because they 22 were no longer operating. So that was the end 23 of the line for them. 24 Q. But you're not aware of any intrusion 25 prior to the time the servers were shut down; is</p>	<p style="text-align: right;">Page 151</p> <p>1 knew their name and their home address. 2 Q. And that was a designed feature of 3 that website; is that right? 4 A. I think it was, although some -- 5 subject to some caveats. Maybe it wasn't 6 supposed to be quite so easy to put in someone 7 else's name and address. I'd need to refresh my 8 recollection by rereading that article. 9 Q. Anything else? 10 MR. BONI: Anything else what? 11 Q. Any other relevant technical 12 experience other than that which we've discussed 13 on which you've relied in preparing your report? 14 MR. BONI: Object to the form. Vague 15 and ambiguous to the extent of what you mean by 16 technical as opposed to any other kind of 17 experience. 18 A. There have been other defects in the 19 privacy and security -- privacy and information 20 security of software systems that I've examined. 21 There was, I think, a compete toolbar that would 22 send your credit card number in plain text, so 23 that anyone in a nearby Internet cafe could see 24 your credit card number. That sort of 25 difficulty of properly securing information in a</p>
<p style="text-align: right;">Page 150</p> <p>1 that right? 2 A. I didn't really look at it one way or 3 the other, but I'm not aware of any intrusion 4 like that. 5 Q. Other than that which we have 6 discussed so far, do you have any other 7 technical experience on which you rely in 8 forming your opinions in this case? 9 A. As I walked back in from lunch, I saw 10 the related project as to the Sears' privacy 11 violation linked at the top of Exhibit 7. It's 12 not that I specifically relied on it, but it is 13 yet another of these examples of a server side 14 security defect that allows the access of 15 information the users weren't intended to be 16 able to access. 17 Q. And was that through predictable 18 URLs? 19 A. No, it wasn't. 20 Q. By what means were they able to 21 access that information? 22 A. I think last name, plus street 23 address, plus zip code. You could see what 24 anyone had bought from Sears, maybe what major 25 appliances anyone had bought from Sears if you</p>	<p style="text-align: right;">Page 152</p> <p>1 multiuser information service is again on my 2 mind when I evaluate the book service here at 3 issue, but it's not that I specifically relied 4 on it. It just informs the totality of my 5 professional experience in this area. 6 Q. Anything else? 7 A. Nothing else comes to mind. 8 Q. Turning to Paragraph 3, you highlight 9 two publications as being particularly relevant 10 to the opinions you render in your report, and 11 the first of those is titled "Shortcomings and 12 Challenges in the restriction of Internet 13 Retransmissions of Over-the-Air Television 14 Content to Canadian Internet Users." Do you see 15 that? 16 A. Yes. 17 Q. Was that about largely the same 18 subject matter as your expert reports in the NFL 19 case? 20 A. Well, it was related, but a little 21 bit broader. 22 Q. Broader in what way? 23 A. The NFL case was limited to the 24 specific facts at hand. One specific defendant 25 with one specific set of security systems. In</p>

1 contrast, the submission to Industry Canada was
2 about all the matters that could potentially
3 arise if such retransmissions were to be
4 permitted, all of the possible systems that
5 future defendant infringers might design and the
6 likely defects and consequences of those
7 systems.

8 Q. Is the thesis of that article that IP
9 geolocation as a security mechanism is
10 imperfect?

11 A. That was one of the points raised and
12 one of the bases for concern.

13 Q. Were there any other bases for
14 concern that were of the same level of
15 importance?

16 A. Well, it's not just that it's
17 imperfect in the sense of one in a thousand
18 times it makes an error or two in 10,000 times
19 it makes an error. It's imperfect in the sense
20 that once an error is identified, it can be
21 systematically exploited such that 1,000 users
22 drive through that one-in-a-thousand hole, and
23 then it becomes a thousand in a thousand because
24 everyone knows that's where the hole is. Just
25 like a hole in a damn, you might say there's

1 only one square inch of the damn that has a
2 hole, but never mind, a lot of water can pour
3 through that one hole.

4 I also pointed out in that article
5 the importance of user incentives, that users
6 will jump through quite a few hoops to get the
7 content that they want, particularly if they
8 don't have another good way to get it. And so
9 the users' willingness to find the hole and to
10 exploit the hole is likely to be commensurate
11 with the value of the content that they would
12 receive. So one shouldn't assume that users
13 won't do it because they haven't done it to get
14 something they didn't want very much. The more
15 they want it, the more they'll be willing to do
16 to get it.

17 Q. So the amount of effort that one
18 needs to put into securing a system is
19 commensurate with the level of demand for the
20 material being protected?

21 MR. BONI: Object to form.

22 A. I think that's right, with the right
23 understanding of demand, the level of user
24 interest vis-a-vis possible alternatives.

25 Q. In Paragraph 3 you also say --

1 mention "Securing Online Advertisers, Rustlers
2 and Sheriffs in the New Wild West." What was
3 that article about?

4 A. That's a cross-cutting article really
5 surveying a series of other articles, including
6 problems affecting consumers; for example,
7 deceptive advertising, as well as problems
8 affecting advertisers, including overcharging in
9 advertising fraud and presenting the
10 relationship between those problems and the
11 underlying computer security systems that are
12 closer to the core of what the readers of this
13 multiple author bound volume would be likely to
14 be familiar with.

15 Q. That relates primarily to the
16 security of end user computers; is that right?

17 A. A portion of it does, but not all.
18 For example, the deceptive advertisements are
19 equally deceptive no matter how well secured
20 your end user device might be.

21 Q. Does this article mention in
22 Paragraph 3, securing online advertising,
23 discuss intrusion to servers connected to the
24 Internet?

25 A. I don't recall one way or the other.

1 I can't think of a specific section in which it
2 would be likely to do so. But it might.

3 Q. Are there any other academic
4 publications of yours which you consider more
5 relevant to the questions at issue in this case
6 than those identified at the end of Paragraph 3?

7 A. I don't usually draw a distinction
8 between academic publications and other
9 publications. They're all important to me.
10 Some are peer reviewed and some aren't. I think
11 we've discussed all of the publications, be they
12 peer reviewed or otherwise, that are most
13 relevant to my opinions.

14 Q. In Paragraph 4, it says that your
15 teaching assignment currently consists of a
16 Harvard Business School elective course called
17 "The Online Economy" which analyzes strategies
18 for all manner of online businesses, and that
19 the course includes concerns arising out of
20 information security. Do you see that?

21 A. Yes.

22 MR. GRATZ: Mark this as Exhibit
23 13 -- 11.

24 (Document marked as Exhibit No. 11
25 for identification.)

<p style="text-align: right;">Page 157</p> <p>1 Q. Do you recognize this document?</p> <p>2 A. Yes.</p> <p>3 Q. What is it?</p> <p>4 A. This is the syllabus of the course as</p> <p>5 presented on the course website.</p> <p>6 Q. Could you identify for me the section</p> <p>7 of the course that deals with information</p> <p>8 security?</p> <p>9 A. Information security is a theme that</p> <p>10 arises in a variety of the cases taught in this</p> <p>11 course. I can go through the cases, the days of</p> <p>12 the course one by one and flag contents in which</p> <p>13 information security arises. In online</p> <p>14 apartment rentals as to Rent Jungle and its</p> <p>15 scrapers, there's quite a bit of discussion</p> <p>16 there, of whether scrapers are an appropriate</p> <p>17 technique, whether it's appropriate to scrape</p> <p>18 your competitors' sites in order to make your</p> <p>19 own site, how would your competitors feel about</p> <p>20 that, is there anything they can do to stop you,</p> <p>21 is there anything you can do to stop them from</p> <p>22 stopping you.</p> <p>23 Q. What do you mean by scraping?</p> <p>24 A. In this context the term "scraper"</p> <p>25 refers to a software system that collects</p>	<p style="text-align: right;">Page 159</p> <p>1 Airlines PDF example I just discussed where to</p> <p>2 get the underlying text would require a user</p> <p>3 name and password, but to get the attachments</p> <p>4 mistakenly, no password was required.</p> <p>5 Q. Does any of the material in your</p> <p>6 online economy course relate to the intrusion</p> <p>7 into servers for the purpose of gaining root</p> <p>8 access?</p> <p>9 A. I don't think we discussed security</p> <p>10 in that context in this class. It comes up more</p> <p>11 in some of the executive education teaching that</p> <p>12 I've done, and other notions of security other</p> <p>13 than obtaining root access arise often in this</p> <p>14 class.</p> <p>15 Q. Do they include gaining access to</p> <p>16 information hosted on web servers which one is</p> <p>17 not permitted to access?</p> <p>18 A. Yes.</p> <p>19 Q. In any situations other than those</p> <p>20 which we've already discussed to today?</p> <p>21 A. No. I think we've discussed the</p> <p>22 examples that arise.</p> <p>23 Q. Turning to Paragraph 5, Paragraph 5</p> <p>24 of your report, you discuss previous expert</p> <p>25 work. Was your first expert engagement the NFL</p>
<p style="text-align: right;">Page 158</p> <p>1 information from another website.</p> <p>2 Q. That's information that that other</p> <p>3 website makes available publicly; is that right?</p> <p>4 MR. BONI: Object to form.</p> <p>5 A. It makes it available on its website,</p> <p>6 perhaps to the general public, perhaps only to</p> <p>7 users who log in with a password, perhaps</p> <p>8 without restriction of any of kind, perhaps</p> <p>9 subject to a terms of use restriction imposed in</p> <p>10 some way.</p> <p>11 Q. And the same restrictions that would</p> <p>12 be imposed on an ordinary web browser are</p> <p>13 imposed on a scraper; is that right? For</p> <p>14 example, if an ordinary user would need to enter</p> <p>15 a user name and password, then the scraper would</p> <p>16 need to provide the same credentials; is that</p> <p>17 right?</p> <p>18 A. Often that's true, although I</p> <p>19 wouldn't want to be too sweeping about it.</p> <p>20 There might be ways to circumvent that sort of</p> <p>21 thing, and I've seen some of those ways from</p> <p>22 time to time.</p> <p>23 Q. Do you discuss any of those ways in</p> <p>24 your class?</p> <p>25 A. Sometimes we discuss that American</p>	<p style="text-align: right;">Page 160</p> <p>1 versus TVRadioNow case?</p> <p>2 A. Yes.</p> <p>3 Q. Was your second expert engagement the</p> <p>4 Multnomah County Libraries versus the United</p> <p>5 States case?</p> <p>6 A. I'm not sure that was second or if</p> <p>7 there was something else in between. That was</p> <p>8 surely the next significant engagement.</p> <p>9 Q. Was the next significant engagement</p> <p>10 Washington Post versus Gator Corporation?</p> <p>11 A. That was certainly shortly</p> <p>12 thereafter, and was one of the larger cases.</p> <p>13 There might have been something else in between.</p> <p>14 Whether that was significant or not...</p> <p>15 Q. In what area of expertise did you</p> <p>16 testify in the Washington Post case?</p> <p>17 A. My testimony there consisted solely</p> <p>18 of expert reports and deposition. The case</p> <p>19 settled before trial.</p> <p>20 Q. And what were your opinions in that</p> <p>21 case?</p> <p>22 A. That was a case about spyware and</p> <p>23 adware installed on users' computers. Initially</p> <p>24 replacing the ads on websites with other ads,</p> <p>25 later showing pop-up ads and pop-under ads. My</p>

<p style="text-align: right;">Page 161</p> <p>1 opinions went to the methods of installation, 2 the disclosures that were shown, the pop-ups 3 themselves, the circumstances in which the 4 pop-ups would appear, user perception of the 5 pop-ups, perhaps other aspects of the pop-ups. 6 Q. Did you render any opinions in that 7 case? 8 A. I think I did. 9 Q. What opinions were those? 10 A. It's a little bit difficult to recall 11 based on the duration, since the case as well as 12 the significant subsequent work in that area. 13 MR. GRATZ: We'll mark this as 14 Exhibit 12. 15 (Document marked as Exhibit No. 12 16 for identification.) 17 Q. Do you recognize this document? 18 A. This is a declaration I wrote in the 19 Gator matter. 20 Q. Is it an expert declaration? 21 A. I believe I was anticipating being 22 designated as an expert, or maybe I had been 23 designated as an expert, so yes, it is an expert 24 declaration. 25 Q. What opinions are contained in</p>	<p style="text-align: right;">Page 163</p> <p>1 right? 2 MR. BONI: Object to form. 3 A. Gator did not intrude onto the 4 plaintiff's servers in that case. 5 Q. In 2003 did you submit an expert 6 report in connection with the case, Wells Fargo 7 & Company and Quicken Loans Inc. versus 8 WhenU.com? 9 A. Yes. 10 Q. What was the subject matter of your 11 declaration in that case? 12 A. It was generally similar to the Gator 13 declaration just discussed. Namely, methods of 14 installation, methods of operation and the 15 advertisements that were displayed. 16 Q. Did it involve any intrusions into 17 servers? 18 A. WhenU software also didn't intrude 19 onto plaintiffs' servers. 20 Q. Did it intrude onto anyone's servers? 21 A. WhenU never needed to place code into 22 the server in order to accomplish its business 23 objectives. 24 MR. GRATZ: I'd like to mark this as 25 Exhibit 13.</p>
<p style="text-align: right;">Page 162</p> <p>1 Exhibit 12? 2 A. I discussed the Gator software 3 generally, including its methods of installation 4 and the advertisements that it displayed. 5 Q. Are those facts or expert opinions? 6 MR. BONI: Object to the form. 7 A. Some of the contents of this 8 declaration reflects my firsthand personal 9 observation and would be appropriate for a fact 10 witness. Other portions of the declaration 11 reflect the judgment and experience of an expert 12 and probably would require that. 13 Q. Did any of your work in the 14 Washington Post case relate to intrusions into 15 servers? 16 A. Significantly at issue was how 17 exactly Gator managed to replace the ads on 18 websites with Gator's own ads and later to show 19 pop-ups and pop-unders. That was all done 20 wholly on the client side, without making an 21 intrusion onto web servers. Although users 22 probably wouldn't understand that and would 23 perceive it otherwise. 24 Q. So no intrusion into servers was 25 involved in the Washington Post case; is that</p>	<p style="text-align: right;">Page 164</p> <p>1 (Document marked as Exhibit No. 13 2 for identification.) 3 Q. Do you recognize this document? 4 A. Yes. 5 Q. Is this the blog post that gave rise 6 to the motion for contempt in the WhenU case? 7 A. It is. 8 Q. At the time you wrote this blog post, 9 were you in possession of confidential WhenU 10 information? 11 A. I believe I had been present in the 12 courtroom at a time when confidential 13 information was presented orally. I don't know 14 whether I was in possession of any written 15 confidential information. 16 Q. Did you in -- strike that. 17 Did you testify in a case called 18 WhenU versus State of Utah? 19 A. Yes. 20 Q. Was the subject matter of your 21 testimony in that case similar to that in the 22 other WhenU case and in the Gator case? 23 A. Similar, although with some different 24 twists based on the procedural context in the 25 specific substantive issues in dispute there.</p>

Page 165

1 Q. How was it different?

2 A. WhenU argued that it would be
3 difficult for WhenU to keep out of the state of
4 Utah because their software operated the same on
5 a nationwide or worldwide basis. I demonstrated
6 that quite the contrary, WhenU's system utilized
7 geolocation to identify the users' geographic
8 location or apparent geographic location, that
9 WhenU told advertisers that the system worked
10 reliably, and that WhenU's system had an
11 adequate geolocation system to substantially
12 avoid showing certain ads or even all ads in
13 Utah.

14 Q. Was it your opinion that WhenU could
15 effectively limit usage to users outside of
16 Utah?

17 A. It could certainly avoid showing ads
18 to users in Utah and could otherwise allow usage
19 of its software if they so chose.

20 Q. That would be through -- by means of
21 geolocation; is that right?

22 A. The existing geolocation system that
23 they had already installed for their own
24 business purposes.

25 Q. It was your opinion that that

Page 166

1 geolocation system was effective?

2 A. That it was sufficiently effective
3 for WhenU's own business purposes and
4 sufficiently effective to comply with the
5 statute in the state of Utah.

6 Q. Is that consistent with your opinion
7 in the National Football League case regarding
8 the reliability of geolocation?

9 A. It is.

10 Q. How so?

11 A. Users attempting to get copyrighted
12 media content would be highly likely to find
13 ways to circumvent any geolocation that was
14 denying them access. You want to watch the
15 video, you pretend you're in Chicago so you can
16 watch the video. In contrast, it would be quite
17 unusual for a user to pretend they were in a
18 different state in order to receive extra pop-up
19 ads which are widely regarded as unwanted rather
20 than as desirable.

21 Q. Did you testify in a case called
22 South Carolina v. Casale Media?

23 A. Yes.

24 Q. What was the subject matter of your
25 testimony in that case?

Page 167

1 A. Casale Media produced a software
2 program purporting to clean spyware off of a
3 user's computer, and it was advertised as having
4 that benefit, even when it didn't really do all
5 that much, and furthermore, at least as
6 important, the advertisements overstated the
7 user's need for the software, in particular, the
8 advertisements would make statements like, your
9 computer is infected when the fact of the matter
10 was Casale had no information one way or the
11 other as to whether or not your computer was
12 infected.

13 Q. And what were the opinions to which
14 you testified in that case?

15 A. First, I needed to reconstruct
16 historic records of what advertisements were
17 shown and how they looked. The advertisements
18 were no longer running as of the commencement of
19 litigation, and I needed to reconstruct how the
20 software worked, what the software said. The
21 software also had been withdrawn from the market
22 by the date of commencement of the litigation.
23 So there was significant forensic work necessary
24 to lay the groundwork.

25 Then, for basically just fact witness

Page 168

1 work to say what was on the screen after I got
2 it to work again. I believe there was also
3 discussion of user perceptions of these offers,
4 how a user would respond upon receiving a
5 particular message.

6 Q. Did you do any forensic work as a
7 basis for the opinions you expressed in your
8 report in this case?

9 MR. BONI: Object to form.

10 A. I didn't examine any historic sources
11 or any archives or anything of that sort.

12 Q. Did you examine any computer systems?

13 A. Yes.

14 Q. What computer systems did you
15 examine?

16 A. Well, I reviewed the documents that
17 are cited in the attachment to the report. I
18 also wanted to check the availability of
19 copyright infringing books right now online as
20 it stands. If you wanted to find a copy of
21 Malcolm Gladwell's new book, how easily could
22 you do that. And if you wanted to find some
23 other book, again in copyright, how easily could
24 you do that, how easily could you get it for
25 free via some unlawful copyright infringement

42 (Pages 165 to 168)

<p style="text-align: right;">Page 169</p> <p>1 website.</p> <p>2 Q. Did you examine the security of any</p> <p>3 computers in connection with this report?</p> <p>4 A. I wasn't checking for security. I</p> <p>5 was checking for the availability of the</p> <p>6 copyright infringement materials.</p> <p>7 Q. And it wasn't copyright infringement</p> <p>8 materials that were available by breaking</p> <p>9 through security but because the infringing</p> <p>10 materials were intended to be accessible by the</p> <p>11 operator of that website; is that right?</p> <p>12 A. That's right.</p> <p>13 Q. Did you testify in a case called</p> <p>14 Arista against Myxer?</p> <p>15 A. Yes.</p> <p>16 Q. In what area of expertise did you</p> <p>17 testify in that case?</p> <p>18 A. As I recall that, my expert work in</p> <p>19 that case was as to the financial benefit that</p> <p>20 the defendant there reaped by showing</p> <p>21 advertising on a website with copyright</p> <p>22 infringing material.</p> <p>23 Q. Did you render any opinions about</p> <p>24 copyright law?</p> <p>25 A. No, I didn't render any opinions</p>	<p style="text-align: right;">Page 171</p> <p>1 isn't publicly known.</p> <p>2 Q. What was the name of that case?</p> <p>3 A. I would have great difficulty</p> <p>4 summoning it for you from memory and I</p> <p>5 apologize.</p> <p>6 Q. In the UMG against Veoh case, in what</p> <p>7 area of expertise did you testify?</p> <p>8 A. I think it was the same as the Myxer</p> <p>9 case just described.</p> <p>10 Q. In the Lens against UMG case, in what</p> <p>11 area of expertise did you testify?</p> <p>12 A. I think it was the same as what was</p> <p>13 just discussed, but I prefer to check the expert</p> <p>14 report to confirm.</p> <p>15 Q. So it is before you as I believe -- I</p> <p>16 believe it's before you. It's not before you.</p> <p>17 MR. GRATZ: We'll mark this as</p> <p>18 Exhibit 14.</p> <p>19 (Document mark as Exhibit No. 14 for</p> <p>20 identification.)</p> <p>21 Q. So you have before you what's been</p> <p>22 marked as Exhibit 14. You recognize this as</p> <p>23 your expert report in the Lens against UMG case?</p> <p>24 A. Yes.</p> <p>25 Q. In what areas of expertise did you</p>
<p style="text-align: right;">Page 170</p> <p>1 about any law.</p> <p>2 Q. Did you render any opinions about</p> <p>3 security in the Myxer case?</p> <p>4 A. I don't recall.</p> <p>5 Q. You don't recall any such opinions?</p> <p>6 A. I don't recall one way or the other.</p> <p>7 There were a series of these cases. I get them</p> <p>8 confused to this day. I think there might have</p> <p>9 been three. There were the number that are</p> <p>10 listed in the attachment to my expert report.</p> <p>11 All of them are properly listed, and what was at</p> <p>12 issue in one versus what was at issue in</p> <p>13 another, I would be on very thin ice if I tried</p> <p>14 to recite that from memory.</p> <p>15 Q. The three cases you're talking about</p> <p>16 are Arista against Myxer in which Arista is a</p> <p>17 record Company on the one side; UMG against</p> <p>18 Veoh, which UMG is a record company on one side;</p> <p>19 and Lens versus UMG, which UMG is a record</p> <p>20 company. You're talking about the three record</p> <p>21 company cases?</p> <p>22 A. There are those three. There might</p> <p>23 have been another one that didn't make it to the</p> <p>24 point where I had my deposition taken, and,</p> <p>25 therefore, it isn't disclosed. It probably</p>	<p style="text-align: right;">Page 172</p> <p>1 testify in that case?</p> <p>2 A. I believe Paragraph 7 details the</p> <p>3 expert opinions as to the scope of copyright</p> <p>4 infringing material or in any event copyrighted</p> <p>5 material present without permission from the</p> <p>6 rights holders, the difficulty of applying fair</p> <p>7 use analysis, the information that the defendant</p> <p>8 in that case considered before sending his</p> <p>9 take-down request and the damage that results</p> <p>10 from a mistaken take-down request in light of</p> <p>11 the counter-notification provided by law.</p> <p>12 Q. Did you render any legal opinions in</p> <p>13 your report in the Lens case?</p> <p>14 A. My intension was not to render any</p> <p>15 legal opinions, and I believe I succeeded in not</p> <p>16 rendering any legal opinions.</p> <p>17 Q. When you say at the top of -- I want</p> <p>18 to direct your attention at the top of what's</p> <p>19 marked at the bottom as page 3 in Exhibit 14.</p> <p>20 Do you see that?</p> <p>21 A. Yes.</p> <p>22 Q. It says, "The type of fair use</p> <p>23 analysis that would be conducted in infringement</p> <p>24 litigation cannot readily be conducted using the</p> <p>25 information available to a rights-holder upon</p>

Page 173	Page 175
<p>1 sending a takedown request." Do you see that?</p> <p>2 A. Yes.</p> <p>3 Q. Was that one of the opinions you</p> <p>4 expressed in the report in the Lens case?</p> <p>5 A. Yes.</p> <p>6 Q. Is that still your opinion today?</p> <p>7 A. It's my opinion as to the facts of</p> <p>8 this matter. There might be other contacts in</p> <p>9 which it would be possible to conduct that fair</p> <p>10 use analysis with the information available, but</p> <p>11 thinking about the context in which I offered</p> <p>12 this report, I think this opinion is correct,</p> <p>13 and it's still my view.</p> <p>14 Q. When you say the type of fair use</p> <p>15 analysis that would be conducted in infringement</p> <p>16 litigation, what do you mean by that?</p> <p>17 A. I believe the expert report details</p> <p>18 that further, for example, 13, and follows from</p> <p>19 there, listing the factors that need to be</p> <p>20 considered in order to apply a fair use</p> <p>21 analysis.</p> <p>22 Q. And that's set forth in Paragraph 14?</p> <p>23 A. Fourteen discusses the factors, and</p> <p>24 then 15 and 16 discussed the limited information</p> <p>25 available to rights-holder confronting an</p>	<p>1 offer an opinion.</p> <p>2 MR. BONI: Joe, we're not proffering</p> <p>3 him as a fair use expert at all. This has</p> <p>4 nothing to do with the report he's doing in this</p> <p>5 case.</p> <p>6 Q. Turning your attention to Paragraph</p> <p>7 17, in the middle of the paragraph it says,</p> <p>8 "Even when all the facts are known, it is</p> <p>9 difficult to apply the required legal standards</p> <p>10 to those facts, which makes fair use</p> <p>11 particularly difficult to apply in any sort of</p> <p>12 perfunctory or quick look review." Do you see</p> <p>13 that?</p> <p>14 A. Yes.</p> <p>15 Q. Is that a statement that you can</p> <p>16 continue to consider true?</p> <p>17 MR. BONI: Object to form.</p> <p>18 A. I think it's true in context. Of</p> <p>19 course, there would be some sets of facts that</p> <p>20 are sufficiently clear-cut that one could make a</p> <p>21 fair use determination one way or the other.</p> <p>22 It's not that every case is a difficult case,</p> <p>23 but that there are some difficult cases.</p> <p>24 Q. Did you identify any of those</p> <p>25 difficult cases in your report in the Lens case?</p>
Page 174	Page 176
<p>1 unauthorized video at YouTube.</p> <p>2 Q. In Paragraph 14 you say, "Nor do the</p> <p>3 examples of Section 107 limit what may be fair</p> <p>4 use." What do you mean by that?</p> <p>5 A. I think the portion of the sentence</p> <p>6 after the colon is informative, quoting some</p> <p>7 authority from a case interpreting the Section</p> <p>8 107, fair use defense.</p> <p>9 Q. It says that the examples in the</p> <p>10 preamble to Section 107 are illustrative and not</p> <p>11 limitative. You see that?</p> <p>12 A. Yes.</p> <p>13 Q. Do you agree with that today?</p> <p>14 A. I think I correctly characterized the</p> <p>15 holding of Campbell. Whether or not I would</p> <p>16 have decided it the same way had I been</p> <p>17 presiding in that matter, I guess I haven't</p> <p>18 really thought it through, but I don't hold that</p> <p>19 position.</p> <p>20 Q. You agree that that's currently the</p> <p>21 law?</p> <p>22 A. I don't know. I'm not enough of a</p> <p>23 scholar --</p> <p>24 MR. BONI: Objection.</p> <p>25 A. -- of fair use law to attempt to</p>	<p>1 A. I guess I cited some cases that were</p> <p>2 reversed, including the three cases cited within</p> <p>3 Paragraph 17. So those must have been difficult</p> <p>4 facts if in each of those three instances the</p> <p>5 cases were twice reversed.</p> <p>6 Q. Do you know what the use at issue in</p> <p>7 the Lens case was?</p> <p>8 A. It was background music to a home</p> <p>9 video.</p> <p>10 Q. Do you think that the use in the Lens</p> <p>11 case was fair use?</p> <p>12 MR. BONI: Object to form.</p> <p>13 A. I'm not sure.</p> <p>14 MR. BONI: Joe, we're not proffering</p> <p>15 him as a fair use expert. This is improper</p> <p>16 questioning.</p> <p>17 Q. You weren't asked to opine on that</p> <p>18 matter in the Lens case?</p> <p>19 A. That's correct, I was not asked.</p> <p>20 Q. And you never, in fact, formed an</p> <p>21 opinion on the question?</p> <p>22 A. I didn't. It's a difficult question</p> <p>23 to me, and no one wanted to pay me to figure it</p> <p>24 out, so I spent my time on other matters</p> <p>25 instead.</p>

<p style="text-align: right;">Page 177</p> <p>1 Q. What makes it a difficult question?</p> <p>2 MR. BONI: Object to form.</p> <p>3 A. Well, some of the factors cut in one</p> <p>4 direction. Some of the factors cut in the other</p> <p>5 direction. And it leaves me uncertain about the</p> <p>6 correct way to apply the Section 107 factors.</p> <p>7 Q. Which factors cut against fair use in</p> <p>8 the Lens case?</p> <p>9 MR. BONI: Object to form. Joe, I'm</p> <p>10 going to stop the questioning. You keep going</p> <p>11 down this path that has nothing whatsoever to do</p> <p>12 with qualifying him for the report for which he</p> <p>13 proffered in this case. It has nothing to do</p> <p>14 with security or his report.</p> <p>15 Q. You can answer the question.</p> <p>16 A. For example, the Lens video used the</p> <p>17 most distinctive part of a song. I can't recall</p> <p>18 what song it was. But, you know, it has a</p> <p>19 chorus or something, the part that everyone</p> <p>20 hums, and wouldn't you know it, in her 30-second</p> <p>21 clip, she manages to get that part. The video</p> <p>22 was set to be viewable by the entire world. It</p> <p>23 wasn't limited just to her family and friends.</p> <p>24 It was accessible by everyone. Those are</p> <p>25 factors that would seem to cut against fair use.</p>	<p style="text-align: right;">Page 179</p> <p>1 Q. In what cases have you practiced as</p> <p>2 an attorney?</p> <p>3 MR. BONI: Object to form.</p> <p>4 A. I brought a class action against</p> <p>5 Yahoo as to overcharging of certain advertisers.</p> <p>6 Q. Anything else?</p> <p>7 A. I was co-counsel in a class action</p> <p>8 against Google as to certain type of squatting</p> <p>9 practices.</p> <p>10 Q. Anything else?</p> <p>11 A. I am currently counsel in a case</p> <p>12 against Apple as to charges incurred by minors</p> <p>13 and charges without a user entering a password</p> <p>14 to authorize the charges.</p> <p>15 Q. Anything else?</p> <p>16 A. I'm currently counsel in a case</p> <p>17 against Facebook as to charges incurred by</p> <p>18 minors.</p> <p>19 Q. Who's your co-counsel in the Facebook</p> <p>20 case?</p> <p>21 A. I need to discuss with my attorney.</p> <p>22 Q. Do you need to discuss --</p> <p>23 A. Yeah.</p> <p>24 Q. Okay.</p> <p>25 THE VIDEOGRAPHER: You want to go</p>
<p style="text-align: right;">Page 178</p> <p>1 Q. What factors weighed in favor of fair</p> <p>2 use in your view in the Lens case?</p> <p>3 A. It would be seem to be a</p> <p>4 noncommercial use, although to be sure, these</p> <p>5 days Google pays significant royalties to those</p> <p>6 who upload videos. So maybe not so</p> <p>7 noncommercial after all. The quality of the</p> <p>8 audio and video were consistent with a home</p> <p>9 recording which is to say not all that good,</p> <p>10 which maybe could cut either direction, in fact,</p> <p>11 depending on how you think about it. It's not</p> <p>12 much of a substitute, but then again, the artist</p> <p>13 would never have allowed his recorded music to</p> <p>14 be presented in this way.</p> <p>15 Q. And on balance, you don't have a view</p> <p>16 one way or the other as to how the fair use</p> <p>17 analysis comes out?</p> <p>18 MR. BONI: Asked and answered.</p> <p>19 A. I don't have a view one way or the</p> <p>20 other.</p> <p>21 Q. In addition to your expert work, have</p> <p>22 you practiced as an attorney?</p> <p>23 A. Yes.</p> <p>24 Q. In what cases?</p> <p>25 MR. BONI: In what cases?</p>	<p style="text-align: right;">Page 180</p> <p>1 off.</p> <p>2 MR. BONI: Go off.</p> <p>3 THE VIDEOGRAPHER: Off the record</p> <p>4 3:02 p.m.</p> <p>5 (Brief recess.)</p> <p>6 THE VIDEOGRAPHER: Back on the record</p> <p>7 3:07 p.m. Could we have the last question read</p> <p>8 back please.</p> <p>9 (Last question read back.)</p> <p>10 A. The firm is Kershaw, K-e-r-s-h-a-w.</p> <p>11 There are some more names after that.</p> <p>12 Q. Are there any other cases in which</p> <p>13 you are or have been counsel?</p> <p>14 A. There are.</p> <p>15 Q. How many?</p> <p>16 A. Some individual disputes, you know,</p> <p>17 airline overcharged money. There are some for</p> <p>18 which I have a confidential role, not on the</p> <p>19 paper as an advisor, co-counsel. I think I've</p> <p>20 listed all of the significant matters, all of</p> <p>21 the matters in which I appear on the papers, for</p> <p>22 example.</p> <p>23 Q. Turning to Paragraph 6 of your report</p> <p>24 it says, "I am being compensated for my work in</p> <p>25 this matter at the rate of \$450 per hour"; is</p>

<p style="text-align: right;">Page 181</p> <p>1 that right?</p> <p>2 A. Yes.</p> <p>3 Q. Is payment contingent on the outcome</p> <p>4 of the litigation?</p> <p>5 A. No.</p> <p>6 Q. Is payment contingent on any opinions</p> <p>7 you render?</p> <p>8 A. No.</p> <p>9 Q. When were you first contacted by</p> <p>10 counsel for plaintiffs in this case?</p> <p>11 A. Several years ago counsel for</p> <p>12 plaintiffs asked me about a different aspect of</p> <p>13 this case.</p> <p>14 Q. What aspect was that?</p> <p>15 MR. BONI: I'm going to instruct the</p> <p>16 witness not to answer on the grounds of the</p> <p>17 attorney work product.</p> <p>18 Q. When did counsel for plaintiffs first</p> <p>19 contact you about putting forward subject matter</p> <p>20 set forth in Exhibit 1?</p> <p>21 A. That's sometime this winter to spring</p> <p>22 after the new year.</p> <p>23 Q. Who contacted you?</p> <p>24 A. Mr. Boni.</p> <p>25 Q. Have you spoken with any of</p>	<p style="text-align: right;">Page 183</p> <p>1 A. Not really.</p> <p>2 Q. Before today, how many hours had you</p> <p>3 spent on this engagement?</p> <p>4 A. I'd estimate about 20.</p> <p>5 Q. Did anyone assist you?</p> <p>6 A. No.</p> <p>7 Q. Have you received payment for your</p> <p>8 work on this case?</p> <p>9 A. No.</p> <p>10 Q. Do you anticipate receiving payment</p> <p>11 for your work on this case?</p> <p>12 A. Yes.</p> <p>13 Q. Who is going to be paying you?</p> <p>14 A. I think the Boni & Zach firm will be</p> <p>15 paying me.</p> <p>16 Q. Turn to Paragraph 7 of your report.</p> <p>17 In the middle of that paragraph it says, in this</p> <p>18 report I address and opine on risks of a</p> <p>19 security breach exposing widely online the</p> <p>20 contents of in-copyright books from a number of</p> <p>21 sources. Do you see that?</p> <p>22 A. Yes.</p> <p>23 Q. Do you provide opinions in your</p> <p>24 report regarding any matters other than risks of</p> <p>25 a security breach exposing widely online the</p>
<p style="text-align: right;">Page 182</p> <p>1 plaintiffs' counsel other than Mr. Boni?</p> <p>2 A. Ms. Zack.</p> <p>3 Q. Anyone else?</p> <p>4 A. A fellow named Josh.</p> <p>5 Q. Anyone else?</p> <p>6 A. I think that's all.</p> <p>7 Q. Have you spoken with anyone regarding</p> <p>8 this engagement other than Mr. Boni, Ms. Zack</p> <p>9 and Josh?</p> <p>10 A. I discussed it with my father,</p> <p>11 spiritual guidance on all important questions.</p> <p>12 Q. What did you discuss with your</p> <p>13 father?</p> <p>14 A. The case generally, my role in it,</p> <p>15 the extent of my opinions, the substance of my</p> <p>16 opinions.</p> <p>17 Q. What did your father tell you?</p> <p>18 A. He supports my work and supportive of</p> <p>19 my work in this area.</p> <p>20 Q. Anything else?</p> <p>21 MR. BONI: Anything else that his</p> <p>22 father told him?</p> <p>23 MR. GRATZ: Correct.</p> <p>24 A. Nothing of any great significance.</p> <p>25 Q. Nothing that comes to mind?</p>	<p style="text-align: right;">Page 184</p> <p>1 contents of in-copyright books?</p> <p>2 A. I'm sure I do.</p> <p>3 Q. What opinions can you identify in</p> <p>4 your report where you express those opinions?</p> <p>5 A. Well, for example --</p> <p>6 MR. BONI: Go ahead. That's okay.</p> <p>7 A. The boldface heading midway through</p> <p>8 this page 2 that piracy of books is already</p> <p>9 real. I don't think that speaks to the risks of</p> <p>10 a security breach exposing in-copyright books.</p> <p>11 This is something that's already happening</p> <p>12 without any security breach above and beyond</p> <p>13 what has already happened.</p> <p>14 Q. Any other opinions that are not</p> <p>15 related to the risks of a security breach</p> <p>16 exposing widely online the contents of</p> <p>17 in-copyright books?</p> <p>18 MR. BONI: Let me object to the form,</p> <p>19 and say that the report speaks for itself. It</p> <p>20 is what it is. If you want a thorough, complete</p> <p>21 answer, then the witness should go through line</p> <p>22 by line and see what exactly there is other than</p> <p>23 what he saw on this page.</p> <p>24 Q. Mr. Edelman, you're welcome to take a</p> <p>25 look at any portions of the report you need to</p>

<p style="text-align: right;">Page 185</p> <p>1 to fully answer my question. The question is</p> <p>2 could you identify for me other than the portion</p> <p>3 you identified in your previous answer about</p> <p>4 present book piracy any opinions you expressed</p> <p>5 in your report other than opinions on the risks</p> <p>6 of a security breach exposing widely online the</p> <p>7 contents of in-copyright books?</p> <p>8 A. I think the rest of the declaration</p> <p>9 fits within that sentence, broadly understood.</p> <p>10 Q. Is it your opinion that the level of</p> <p>11 security afforded to the scanned books is</p> <p>12 relevant to the fair use analysis in this case?</p> <p>13 MR. BONI: Object to form.</p> <p>14 A. I think it could be.</p> <p>15 Q. How?</p> <p>16 A. In a couple of ways. One, the level</p> <p>17 of security that Google is providing, can</p> <p>18 provide, will provide speaks to the effect on</p> <p>19 the market for the books, a factor under Section</p> <p>20 107. Second, the practices of other sites that</p> <p>21 might engage in book scanning of their own with</p> <p>22 quite different security practices potentially,</p> <p>23 could certainly affect those same Section 107</p> <p>24 factors.</p> <p>25 Q. By those same Section 107 factors, do</p>	<p style="text-align: right;">Page 187</p> <p>1 factors. Subject to the proviso that, of</p> <p>2 course, we must consider all of the other sites,</p> <p>3 book scanning services that might seek to engage</p> <p>4 in similar conduct if this were ruled to be a</p> <p>5 fair use.</p> <p>6 Q. Is there any other way in which it's</p> <p>7 your opinion that the level of security afforded</p> <p>8 to the scanned books is relevant to the fair use</p> <p>9 analysis?</p> <p>10 MR. BONI: Object to form.</p> <p>11 A. I think it's mostly through the</p> <p>12 fourth factor, as I've already discussed.</p> <p>13 Q. In Paragraph 8 you say, "I conclude</p> <p>14 that unrestricted and widespread conduct of the</p> <p>15 sort engaged in by Google would result in a</p> <p>16 substantially adverse impact on the potential</p> <p>17 market for books."</p> <p>18 A. Yeah.</p> <p>19 Q. Do you see that?</p> <p>20 A. Yes.</p> <p>21 Q. Is that the conclusion of your</p> <p>22 report?</p> <p>23 MR. BONI: Object to form.</p> <p>24 A. That is a conclusion of my report.</p> <p>25 Q. Is that the most important conclusion</p>
<p style="text-align: right;">Page 186</p> <p>1 you mean the fourth factor, the effect on the</p> <p>2 market?</p> <p>3 A. That one in particular, yes.</p> <p>4 Q. Is there any other way in which the</p> <p>5 level of security afforded to the scanned books</p> <p>6 is relative to the fair use analysis?</p> <p>7 A. The level of security is certainly</p> <p>8 related to the character of the use. If the</p> <p>9 level of security was to store them on a hard</p> <p>10 drive, put the hard drive in a vault, put the</p> <p>11 vault at the bottom of the ocean, that would be</p> <p>12 one character of use. And a different character</p> <p>13 of use is to connect the hard drive to a set of</p> <p>14 servers and display the contents in some form</p> <p>15 for all the world to see, but I think it could</p> <p>16 go to the first factor also.</p> <p>17 Q. So a site with better security would</p> <p>18 have a purpose or character of use that is more</p> <p>19 likely to favor fair use?</p> <p>20 MR. BONI: Object to form. He's not</p> <p>21 here as a fair use expert, Joe. And he's not</p> <p>22 offering an opinion for that reason.</p> <p>23 Q. You can answer.</p> <p>24 A. I think all else equal, that's the</p> <p>25 way I've been taught to apply the fair use</p>	<p style="text-align: right;">Page 188</p> <p>1 of your report?</p> <p>2 MR. BONI: Object to form.</p> <p>3 A. I guess I hadn't ranked the</p> <p>4 conclusions in order of importance.</p> <p>5 MR. BONI: Important to whom?</p> <p>6 Important in what way? It's too vague and</p> <p>7 ambiguous a question.</p> <p>8 MR. GRATZ: Please let the witness</p> <p>9 finish.</p> <p>10 MR. BONI: I'm sorry.</p> <p>11 MR. GRATZ: I'll ask it again. Could</p> <p>12 we have the question read back.</p> <p>13 Q. Is the statement in Paragraph 8 the</p> <p>14 most important conclusion in your report?</p> <p>15 MR. BONI: Object to form. Vague and</p> <p>16 ambiguous as to the term "important."</p> <p>17 A. I hadn't ranked the conclusions by</p> <p>18 importance, so I'm not sure.</p> <p>19 Q. Referring to Paragraph 8, what do you</p> <p>20 mean by unrestricted?</p> <p>21 A. There are several kinds of</p> <p>22 restrictions that could in principle attach to</p> <p>23 anyone engaged in the kind of conduct Google has</p> <p>24 been engaged in. By unrestricted I meant to</p> <p>25 convey that perhaps few to none of those</p>

<p style="text-align: right;">Page 189</p> <p>1 restrictions would, in fact, be in place. 2 Q. What are those restrictions? 3 A. For example, there could be 4 restrictions as to the length of each snippet, 5 the number of snippets per page, the number of 6 times a user can view snippets from a single 7 work, the systems to keep out automated crawling 8 software, the systems to prevent users from 9 pooling their snippets in order to slowly piece 10 back together the entire work, a variety of 11 restrictions in that vein. 12 Q. And your conclusion is that without 13 those restrictions, the use would result in a 14 substantially adverse impact on the potential 15 market for books? 16 A. That's certainly true. 17 MR. BONI: Object to form. Doesn't 18 limit it to unrestricted. You're not reading it 19 accurately, Joe. You left out unrestricted and 20 widespread conduct of the sort engaged in by 21 Google. 22 Q. So I just want to make sure I 23 understand what you mean by unrestricted, and by 24 unrestricted in your previous answer I 25 understand you to mean that it's not -- it</p>	<p style="text-align: right;">Page 191</p> <p>1 sort engaged in by Google? 2 A. I mean the large-scale scanning of a 3 large number of in-copyright books, the digital 4 archival of those scans, and the presentation 5 of, at least, portions of those works through an 6 interactive website. 7 THE VIDEOGRAPHER: Here ends Tape 4. 8 Off the report, 3:21 p.m. 9 (Brief recess.) 10 THE VIDEOGRAPHER: We're back on the 11 record. It's 3:24 p.m. 12 Q. Mr. Edelman, I understand that 13 following our break and your discussion with 14 Mr. Boni, you have a clarification for one of 15 your previous responses. 16 A. Yes. 17 Q. Go ahead. 18 A. The word "unrestricted" in Paragraph 19 8, what I meant to convey when I wrote this 20 paragraph was that the word "unrestricted" 21 refers to the sort of conduct that might be 22 permitted if the court were to rule that 23 Google's conduct was a fair use, and, therefore, 24 that other sites and services could engage in 25 the same conduct, consistent with that ruling.</p>
<p style="text-align: right;">Page 190</p> <p>1 wouldn't be subject to restrictions such as 2 restricting the length of the snippet, 3 restricting the number of snippets per page and 4 so on; is that right? 5 A. That's what I have in mind sitting 6 here today rereading the sentence. There may be 7 other restrictions that could reasonably be read 8 into that word. 9 Q. The next word is -- it says 10 unrestricted and widespread. What do you mean 11 by widespread? 12 A. Affecting a large number of works, a 13 large number of books, accessible to a large 14 number of users, unreasonable price. If you 15 told me that, you know, the subscription would 16 be \$1 million a year to be able to search the 17 books, that wouldn't be widespread. Few people 18 would be willing to pay it. It would be less 19 likely to have an adverse impact on the 20 potential market for books. 21 Q. In Paragraph 8 you referred to 22 unrestricted and widespread conduct of the sort 23 engaged in by Google. Do you see that? 24 A. Yes. 25 Q. What do you mean by conduct of the</p>	<p style="text-align: right;">Page 192</p> <p>1 Q. What restrictions would not be in 2 place in such a circumstance making it 3 unrestricted? 4 A. The restrictions of the copyright 5 act, I suppose, would not be in place if this 6 were deemed to be a fair use, and, therefore, 7 permissible notwithstanding restrictions of the 8 copyright act. 9 Q. So do I understand you to be 10 testifying that what unrestricted means is 11 permissible under the Fair Use Doctrine? 12 A. What I intended to convey in 13 Paragraph 8 was that if the fair use ruling were 14 in Google's favor and if other sites arose on a 15 widespread basis with conduct similar to 16 Google's, then there would be a substantially 17 adverse impact on the potential market for 18 books. 19 Q. Does the word "unrestricted" in 20 Paragraph 8 refer to restrictions on the length 21 of a snippet? 22 A. The length of a snippet is surely a 23 factor that would be considered for purposes of 24 a finding of fair use, but the word 25 "unrestricted" there was intended, perhaps</p>

1 somewhat unclearly, but intended to capture all
2 that would follow if a fair use ruling were to
3 find that the Google conduct in this area is a
4 fair use.

5 Q. When you refer in this sentence to
6 conduct of the sort engaged in by Google, are
7 you including or excluding from what you mean by
8 that phrase the security measures put in place
9 by Google?

10 MR. BONI: Object to form. You can
11 answer.

12 A. Well, the security measures
13 encompasses certainly multiple aspects; for
14 example, one could think of the duration, the
15 length in words of a snippet as a security
16 measure, the number of snippets per page as a
17 security measure, the way Google secures its
18 network and secures its server is surely a
19 security measure.

20 What I envision here is the state of
21 affairs in which a court offers a fair use
22 finding in Google's favor, and then others begin
23 to install similar services in their own way.
24 They probably do it somewhat differently than
25 Google. They might have 20 percent more words

1 in their snippet. Their servers might be a
2 little bit less secure because they're not quite
3 as clever as Google in securing them. Exactly
4 which things they do differently and how they do
5 them differently is hard to predict sitting here
6 today, but in Paragraph 8, I intended to
7 contemplate the state of affairs where they
8 begin to head down that road.

9 Q. Could those differences between those
10 later users and Google affect whether the use by
11 the later user you're hypothesizing is, in fact,
12 a fair use?

13 A. Yes, they could.

14 Q. So a ruling that what Google is doing
15 is fair use doesn't necessarily mean that what
16 someone else would be doing, to the extent it
17 was different from what Google was doing, would,
18 likewise, be a fair use; is that right?

19 A. I think that's true. At least when
20 taken to the extreme. If there was a site whose
21 idea of a snippet was up to 500 words, one would
22 scoff at the idea that a snippet could have 500
23 words, and it's possible that Google's use is a
24 fair use, and that site's use is not a fair use.

25 On the other hand, whatever Google is

1 doing, I bet you could add 20 percent to it, and
2 if Google's use is a fair use, that plus 20
3 percent version might also be a fair use, and
4 how about plus 40 percent. One gets into some
5 interesting questions of the gray area.

6 Q. Is it your view that if what Google
7 is doing is found to be a fair use, then showing
8 20 percent larger snippets is necessarily also a
9 fair use?

10 A. Not necessarily. There has to be a
11 line somewhere. But, surely, there will be some
12 difficult line-drawing exercises in that event.

13 Q. Who would be the arbitrator in those
14 line-drawing exercises?

15 MR. BONI: Object to form.

16 A. I think it's beyond the scope of my
17 report, but I'm happy to try to answer. I think
18 it would have to be a judge when the case was
19 brought, if such a case was brought.

20 Q. And that judge could decide whether
21 these different circumstances were, likewise,
22 fair use or whether the differences meant that
23 the later user was not engaged in fair use; is
24 that right?

25 A. I think that would be the question

1 posed, yes.

2 Q. What does "substantially adverse
3 impact" mean in Paragraph 8?

4 A. I was thinking about the word
5 substantial with its meaning in multiple
6 contexts, material, substantial, that is,
7 something that an author or publisher would need
8 to consider when deciding whether or not to
9 engage in the economic enterprise of writing or
10 publishing a book.

11 Q. And you use the word "would" in
12 Paragraph 8. Do you see that?

13 A. Yes.

14 Q. Does that indicate that it is your
15 view that the probability of such a
16 substantially adverse impact is 100 percent?

17 A. In this state of affairs discussed
18 here, I think the probability is very, very
19 high. I wouldn't call it 100 percent. Nothing
20 is certain. But it's sufficiently likely that
21 the word "would" is an appropriate word to use.

22 Q. You've referred in your previous
23 answer "the state of affairs discussed here."
24 What did you mean by that?

25 A. The hypothesis of Paragraph 8.

<p style="text-align: right;">Page 197</p> <p>1 Q. The hypothesis is that if</p> <p>2 unrestricted and widespread conduct of the sort</p> <p>3 engaged in by Google, that is, widespread</p> <p>4 scanning, archiving and presentation of portions</p> <p>5 through web services without necessarily the</p> <p>6 limitations and security measures put in place</p> <p>7 by Google were to occur, then that would result</p> <p>8 in a substantially adverse impact on the</p> <p>9 potential market for books; is that right?</p> <p>10 A. I was with you except for the clause</p> <p>11 that began "without."</p> <p>12 Q. Did you not understand it or not</p> <p>13 agree with it?</p> <p>14 A. I thought that when you said it it</p> <p>15 differed from what I intended to convey. The</p> <p>16 meaning of the word "unrestricted," as I</p> <p>17 intended to use it here, is not restricted by</p> <p>18 the Copyright Act because the fair use defense</p> <p>19 offers that exception of the Copyright Act.</p> <p>20 Q. So if that conduct, that is,</p> <p>21 scanning, archiving, and presentation of</p> <p>22 portions of works was found to be fair use,</p> <p>23 regardless of security measures, it's your view</p> <p>24 that that would result in a substantially</p> <p>25 adverse impact on the potential market for</p>	<p style="text-align: right;">Page 199</p> <p>1 that would result in a substantially adverse</p> <p>2 impact on the potential market for books?</p> <p>3 A. If they were doing it exactly the</p> <p>4 same as Google, that is not my view. But I</p> <p>5 didn't intend to address that situation either.</p> <p>6 I intended to address the situation where</p> <p>7 they're doing it like Google except, except that</p> <p>8 they're doing it themselves, and they're not</p> <p>9 quite as diligent, or they're cutting some</p> <p>10 corners, but nonetheless, they manage to fall</p> <p>11 within the Google fair use ruling.</p> <p>12 Q. You say it would result in a</p> <p>13 substantially adverse impact on the potential</p> <p>14 market for books. Do you mean that on balance</p> <p>15 the effect would be negative?</p> <p>16 A. We haven't discussed any positive</p> <p>17 effects.</p> <p>18 MR. BONI: Object to form.</p> <p>19 Q. Does Google's current conduct with</p> <p>20 respect to in-copyright books have any positive</p> <p>21 effects on copyright-holders?</p> <p>22 A. It could in some situations.</p> <p>23 Q. Would the conduct you hypothesize in</p> <p>24 Paragraph 8 have any positive impact on</p> <p>25 copyright-holders?</p>
<p style="text-align: right;">Page 198</p> <p>1 books?</p> <p>2 MR. BONI: Object to form. Joe,</p> <p>3 that's mischaracterizing the nature of our</p> <p>4 claims by leaving out the fact that we also</p> <p>5 allege that the conduct engaged in by Google</p> <p>6 includes distribution of the scans back to the</p> <p>7 libraries.</p> <p>8 Q. You can answer the question, Mr.</p> <p>9 Edelman.</p> <p>10 A. Again, you've inserted into the</p> <p>11 question the hypothesis that the other sites</p> <p>12 have no restriction as to snippet length or</p> <p>13 quantity or what have you, and that certainly</p> <p>14 makes the conclusions of Paragraph 8 even more</p> <p>15 certain. If the other sites are offering</p> <p>16 snippets of exceptional length, then I</p> <p>17 definitely stand by the conclusion of</p> <p>18 Paragraph 8. But even if we don't add that</p> <p>19 additional hypothesis, I still stand by</p> <p>20 Paragraph 8 as written.</p> <p>21 Q. So is it your view, as expressed in</p> <p>22 Paragraph 8, that if there were a dozen or 100</p> <p>23 other enterprises doing in every respect exactly</p> <p>24 what Google does with all of Google's security</p> <p>25 measures and all of Google's resources, that</p>	<p style="text-align: right;">Page 200</p> <p>1 A. It might. We'd need to look at the</p> <p>2 sites and their specific practices to see.</p> <p>3 Q. By the "sites," you mean the future</p> <p>4 sites that could come into being?</p> <p>5 A. Precisely.</p> <p>6 Q. Is the effect you hypothesize on</p> <p>7 books in general or on particular books?</p> <p>8 A. I meant to cover the full universe of</p> <p>9 books that are subject to the scanning.</p> <p>10 Q. The scanning by the future users?</p> <p>11 A. Right. Although to be sure, in</p> <p>12 principle, there might be some effect even on</p> <p>13 books that were never scanned. The book that I</p> <p>14 declined to write because I anticipated that it</p> <p>15 would be scanned, not knowing that every single</p> <p>16 one of the scanners would hate my book so much</p> <p>17 that they wouldn't bother to scan it. It's the</p> <p>18 threat of scanning and the threat of</p> <p>19 distribution that has the preclusive effect,</p> <p>20 discouraging the production of the book, for</p> <p>21 example.</p> <p>22 Q. Would the effect be the same for all</p> <p>23 authors?</p> <p>24 MR. BONI: Object to form.</p> <p>25 A. I think there are some important</p>

Page 201	Page 203
<p>1 effects that would be the same, substantially 2 the same for all authors. There might be some 3 others that would differ in idiosyncratic ways. 4 Q. How would those differ? 5 A. There might be some authors for whom 6 the snippet better captures the essence of the 7 work than others, where the work must be read as 8 a whole. There might be some authors who are so 9 well known that they've already sold every 10 possible copy they could sell, others who could 11 benefit from visibility links to Google, others 12 who would suffer because the online copy of 13 their book would be a realistic substitute for 14 purchasing the book. 15 Q. Any other way? 16 MR. BONI: Again, this is not what 17 the witness is here to testify about. He's here 18 to testify about security. 19 MR. GRATZ: Well, I'm asking about 20 his opinion that something would result in a 21 substantially adverse impact on the potential 22 market for books, and I want to figure out what 23 he means by that. 24 Q. So is there any other way that 25 books -- that the conduct you hypothesize would</p>	<p>1 an expert about. He's not here to tell you 2 whether in print or out of print differs. 3 That's a legal question, and he is not here to 4 opine about that area of this case. You really 5 ought to stick to what he's proffered for. 6 Q. Referring to Paragraph 8 of your 7 report, Mr. Edelman, the last word in that 8 paragraph is "books." Do you see that? 9 A. Yes. 10 Q. And I want to ask you a question 11 about what books you are referring to by that 12 reference in Paragraph 8 of your report. The 13 substantially adverse impact you referred to in 14 Paragraph 8 of your report on the potential 15 market for books, does that substantially 16 adverse impact, will it vary, depending whether 17 the book is in print or out of print? 18 MR. BONI: Object to form. 19 A. It's not a question I thought about 20 when drafting the report. 21 Q. The substantially adverse -- 22 actually. 23 Let me ask this: Do you have a view 24 about it? 25 A. Every book is in print when it's</p>
Page 202	Page 204
<p>1 differ in its effect from book to book? 2 MR. BONI: Object to form. 3 A. There probably are some books that 4 are more amenable to being used in snippets. 5 Others for which having the entire work is 6 particularly important. Probably some you need 7 in your bag, and some where you can accept an 8 online substitute. There could be differences 9 of this sort. I think these differences in 10 general are smaller than the overall effect. 11 Q. Would it matter to the amount of the 12 adverse impact on the potential market for a 13 book in the situation you hypothesized if that 14 book was in print or out of print? 15 MR. BONI: Object to form. He's not 16 here as a fair use expert, Joe. 17 MR. GRATZ: I'm not asking about fair 18 use. 19 MR. BONI: You are. That's a --- 20 that's a legal -- you're calling for a legal 21 conclusion there, and you know you are. 22 Q. You can answer the question. 23 MR. BONI: No, at this point, I'm 24 going to cut it off. That's not what he's here 25 to -- that's not what he's proffered himself as</p>	<p>1 published. The day I publish it, it's in print. 2 The day I consider writing it, I'm planning for 3 it to be in print for a while, so that I can 4 sell some copies and be paid for my efforts in 5 writing it. No one expects their book to be in 6 print forever. You do expect it to be in print 7 for a while. If digital copies reduced your 8 ability to sell it when it's in print for a 9 while, then you'll enjoy lesser revenue and 10 lesser profit from selling it. 11 So I would think it would affect all 12 books. As to the guys who are dead, we can't 13 motivate Ben Franklin to write any more books. 14 No matter what we do with the Copyright Act, 15 he's still dead, and he's not going to write any 16 more books for us, be that as it may. 17 Q. That means that with respect to books 18 that are already out of print, there wouldn't be 19 an impact one way or the other, as long as they 20 were out of print at the time the scanning took 21 place; is that right? 22 MR. BONI: Object to form. 23 A. That's beyond what I've thought about 24 previously. There might be some factors I'm not 25 considering.</p>

Page 205

1 MR. BONI: You should stick to what
2 you were --

3 MR. GRATZ: Please don't interrupt
4 the witness.

5 MR. BONI: He was finished -- he was
6 finished, and I'm cautioning the witness to
7 testify about the subject matter of the expert
8 report and your qualifications.

9 Q. So, Mr. Edelman, that means that with
10 respect to books that are already out of print
11 at the time the hypothesized scanning took
12 place, the substantially adverse impact on the
13 potential market for those books couldn't occur
14 because they're already exited from the market;
15 is that right?

16 MR. BONI: Object to form. You can
17 answer.

18 A. I'm not sure. There could be --
19 there could be effects that I haven't
20 considered. It's just so far outside of what
21 the expert report is about that I shouldn't
22 speculate.

23 Q. So you didn't consider the effect on
24 in-print versus out-of-print books in forming
25 the opinions set forth in your expert report?

Page 206

1 A. I considered all books taken as a
2 whole, taken collectively.

3 Q. Did you take any steps to quantify
4 the effect referred to in Paragraph 8?

5 A. I did not.

6 Q. The effect referred to in Paragraph
7 8, is it an effect that would result -- it's an
8 effect that would result from follow-on behavior
9 by third parties in the event of a ruling of a
10 certain sort in your view, not as a result of
11 Google's current actions; is that right? In
12 other words, you aren't opining here about the
13 effects of what Google has done to date?

14 A. I'm not opining on the effects of
15 what Google has done to date. It's about
16 something else, either what Google might do in
17 the future or what others might do in the
18 future.

19 Q. Turning to Paragraph 9 of your
20 report, you say "If the Google Library Project
21 is found not to be a fair use, then books could
22 be digitally copied, distributed and displayed
23 through licenses that include security protocols
24 and a damages structure for breaches of those
25 protocols." Do you see that?

Page 207

1 A. Yes.

2 Q. If -- if the Google Library Project
3 is found to be a fair use, then books could,
4 likewise, in your view, be digitally copied,
5 distributed and displayed in their entirety
6 through licenses that include secured protocols
7 and a damages structure for breaches of those
8 protocols; is that also true?

9 A. Thanks to the breadth of the word
10 "could," it's true, but the reality is that the
11 Google Library Project would have no reason to
12 enter into a license that includes security
13 protocols, nor would any other site have reason
14 to enter into a license that includes security
15 protocols because they can instead take the
16 material without license and without security
17 protocols.

18 Q. What security terms do you
19 hypothesize?

20 A. My thinking here is guided by
21 approaches used in other sectors. For example,
22 the credit card network has quite well-developed
23 security rules as to what a merchant or bank
24 must do to secure this valuable material in
25 order to avoid causing harm to others in that

Page 208

1 ecosystem. So there are specific actions that
2 must be taken, specific audits, specific
3 technologies that must be used, and then there
4 are a set of damages, both actual damages and
5 liquidated damages in the event of breach,
6 compensation to be paid to those who suffer harm
7 as a result of a breach.

8 Q. And those damages are -- in your
9 previous answer are you referring to something
10 called PCI?

11 A. PCI is one of the requirements of
12 that web of contract, although there are others
13 beyond PCI. PCI largely refers to the technical
14 standards, but then there's a set of contracts.
15 If you fail your PCI, if you had a breach during
16 a period where you hadn't complied with your
17 PCI, then you must pay this much money to these
18 victims.

19 Q. Are you aware of any such agreements
20 in The Book Space?

21 A. My understanding is that the
22 proposed, now defunct settlement agreement in
23 this case had provisions in that vein.

24 Q. Are you aware of any others?

25 A. In the related context of digital

52 (Pages 205 to 208)

Page 209	Page 211
<p>1 music and digital movies, my understanding is</p> <p>2 that there are confidential contracts typically</p> <p>3 between the right-holders and the technology</p> <p>4 providers offering certain compensation in the</p> <p>5 event of certain breaches.</p> <p>6 Q. Do you know the terms of those</p> <p>7 contracts?</p> <p>8 A. Some of them may be publicly</p> <p>9 available. My understanding was that most of</p> <p>10 them are confidential and not readily available.</p> <p>11 Q. I'm not asking whether they are</p> <p>12 available. I'm asking whether you know the</p> <p>13 terms of any of those contracts governing the</p> <p>14 storage of digital music or movies?</p> <p>15 A. I haven't had the opportunity to read</p> <p>16 the contract. I know about them only</p> <p>17 secondhand.</p> <p>18 Q. And what you know secondhand is that</p> <p>19 they include liquidated damages for security</p> <p>20 breaches?</p> <p>21 A. They include the kinds of methods</p> <p>22 just discussed, some combination of liquidated</p> <p>23 damages, perhaps actual damages, perhaps</p> <p>24 specific actions to be taken, specific</p> <p>25 technologies to be implemented.</p>	<p>1 opinions set forth in the first sentence of</p> <p>2 Paragraph 9 of your report?</p> <p>3 A. The first sentence there discusses</p> <p>4 what could be done, and to see what could be</p> <p>5 done, I need look no further than the proposed</p> <p>6 settlement agreement in this case and consider</p> <p>7 what I as an attorney or a business person might</p> <p>8 do if I were trying to solve this problem.</p> <p>9 Q. Did you do a survey of contracts</p> <p>10 governing the digital storage of books in</p> <p>11 connection with forming the opinions you</p> <p>12 expressed in your report?</p> <p>13 A. I did not do such a survey.</p> <p>14 Q. Have you ever seen such a contract,</p> <p>15 setting aside the settlement agreement in this</p> <p>16 case that was rejected by the court?</p> <p>17 A. I'm not sure.</p> <p>18 Q. Do any come to mind?</p> <p>19 A. Nothing comes to mind.</p> <p>20 Q. Were there any on which you relied in</p> <p>21 forming the opinions set forth in your report?</p> <p>22 A. No.</p> <p>23 Q. Do you know whether any such</p> <p>24 contracts include the security term which you</p> <p>25 hypothesize in the first sentence of</p>
Page 210	Page 212
<p>1 Q. And how do you know that?</p> <p>2 A. I'm not sure. I've a few</p> <p>3 possibilities in mind. People who might have</p> <p>4 told me this previously.</p> <p>5 Q. What are those people?</p> <p>6 A. My contact at Universal Music Group</p> <p>7 pursuant to the cases previously discussed is</p> <p>8 the general counsel at Universal Music Group,</p> <p>9 and I think his name is a Mr. Geller.</p> <p>10 Q. Is that Harvey Geller?</p> <p>11 A. That's right. It might be from him.</p> <p>12 It might be from someone else. It might be from</p> <p>13 discussions at an executive education program</p> <p>14 here on the HBS campus where I spent some time</p> <p>15 with music industry participants.</p> <p>16 Q. Did you rely on your conversations</p> <p>17 with Harvey Geller in forming your opinions set</p> <p>18 forth in Paragraph 9 of your report?</p> <p>19 A. No.</p> <p>20 Q. Did you rely on any discussions with</p> <p>21 any content industry participant in forming the</p> <p>22 opinions set forth in Paragraph 9 of your</p> <p>23 report?</p> <p>24 A. No.</p> <p>25 Q. On what did you rely in forming the</p>	<p>1 Paragraph 9?</p> <p>2 A. I guess I don't know for sure.</p> <p>3 Q. Do you know whether any include the</p> <p>4 damages term which you hypothesize in the first</p> <p>5 sentence of Paragraph 9?</p> <p>6 A. I don't know for sure.</p> <p>7 Q. Are you aware of something called the</p> <p>8 Google Books Partner Program?</p> <p>9 A. Yes.</p> <p>10 Q. What is it?</p> <p>11 A. That's a program whereby publishers</p> <p>12 can provide copies of their books to Google for</p> <p>13 display in any of several versions to users who</p> <p>14 enter relevant searches.</p> <p>15 Q. Is it your understanding that there</p> <p>16 are more than 45,000 publishers participating in</p> <p>17 that program?</p> <p>18 A. I'm not sure.</p> <p>19 Q. Do you know the terms of any of the</p> <p>20 Google Books Partner Program agreement?</p> <p>21 A. I'm not sure. If the contract is</p> <p>22 posted. I might have read it, but I don't</p> <p>23 recall one way or the other.</p> <p>24 MR. GRATZ: I'd like that marked as</p> <p>25 Exhibit 19, this document.</p>

Page 213	Page 215
<p>1 (Document marked as Exhibit No. 15 2 for identification.) 3 Q. Have you seen this document before, 4 Mr. Edelman? 5 A. I think I've seen this at least once, 6 yes. 7 Q. What is it? 8 A. It says it's the "Google Books 9 Partner Program standard terms and conditions." 10 Q. Does Exhibit 15 include the security 11 and damages terms that you hypothesize in 12 Paragraph 9 of your report? 13 A. It includes at least some, for 14 example, Paragraph 4. 15 Q. In Paragraph 4 says that, "Google 16 will use commercially reasonable efforts to 17 limit the number of pages viewed and to disable 18 right-click cut, copy and paste functions, 19 provided that Google does not guarantee that its 20 efforts to prevent or limit the actions stated 21 above will in every instance be effective." Is 22 that right? 23 A. Yes. 24 Q. Does that differ from the terms you 25 have hypothesized would be negotiated in</p>	<p>1 contract. 2 Q. So when you say in Paragraph 9 that 3 books could be copied through licenses that 4 include a damages structure for breaches of 5 those protocols, do you mean anything other than 6 include promises not to breach those protocols 7 which could then result in contract expectation 8 damages in a breach of contract suit? 9 MR. BONI: Object to form. 10 Mischaracterizes his testimony. 11 A. I did envision something other than 12 expectation damages. I envisioned something 13 that would look more like liquidated damages due 14 to the significant difficulty of proving out 15 one's expectation damages, but in principle, the 16 parties could agree to do it either way. It 17 would be a negotiation between them, and I'm not 18 going to tell them where they have to end up in 19 that negotiation. 20 Q. Do you have a view as to what the 21 probability would be that the parties to a 22 license of the -- the license -- strike that. 23 Do you have a view as to what the 24 probability would be that the parties to the 25 license you identify in Paragraph 9 of your</p>
Page 214	Page 216
<p>1 Paragraph 9 of your report? 2 A. Well, this is an agreement negotiated 3 between Google and a publisher. The publisher 4 gives up some rights. On the other hand, they 5 stand to gain advertisement revenue from Google 6 pursuant to Section 8 and perhaps visibility, 7 perhaps some other benefits. So it's a contract 8 negotiated between two parties. This is a fine 9 example of the kind of outcome that might 10 result. 11 Q. So in your view -- actually let me 12 ask this. 13 Does Exhibit 15 include the damages 14 terms that you hypothesize in Paragraph 9 of 15 your report? 16 A. It doesn't include explicit terms to 17 that effect. On the other hand, it includes a 18 specific commitment, commercially reasonable 19 efforts, words that have meaning. If it should 20 turn out that Google used less than commercially 21 reasonable efforts, and if damages ensued, you'd 22 expect the relying party to be able to bring 23 suit for the damages that resulted from that 24 breach, subject to any exclusions or waivers 25 that might be provided elsewhere in the</p>	<p>1 report would, in fact, negotiate inclusion of 2 liquidated damages as a term of the contract? 3 A. Well, I think they just might because 4 Google is so confident in its excellent security 5 that they would view that kind of promise as 6 cost free. If we are invaded by martians or 7 someone hacks our server, we'll give you a 8 million dollars, and neither of those things is 9 going to happen. We're so confident in our 10 engineers, that we're willing to put a million 11 dollars behind it. 12 Q. Is Exhibit 15 a counter example to 13 that hypothesis, in that it does not include 14 provision for liquidated damages? 15 A. You know, this is the standard terms 16 and conditions. Whether every publisher gets 17 this, I'm not sure. I wouldn't be surprised if 18 a big publisher, a publisher with works that 19 Google particularly wanted, a publisher that 20 possessed some market power, frankly, was able 21 to insist on terms superior to these standard 22 terms. 23 Q. But it's not your view that every 24 copyright-holder would have the power to insist 25 on such terms in the negotiation you hypothesize</p>

<p style="text-align: right;">Page 217</p> <p>1 in Paragraph 9 of your report?</p> <p>2 MR. BONI: You mean with Google or</p> <p>3 with anybody? It's a very vague question,</p> <p>4 unless you limit it.</p> <p>5 Q. With anybody?</p> <p>6 A. Yeah, if there were a marketplace of</p> <p>7 many companies all needing permission to scan</p> <p>8 books or digitally post books, some of whom had</p> <p>9 great difficulty getting traction, I wouldn't be</p> <p>10 surprised if the ones having the most difficulty</p> <p>11 were willing to put their money behind it, some</p> <p>12 kind of a performance bond or what have you.</p> <p>13 There have been sectors in which this sort of</p> <p>14 thing has occurred where performance bonds</p> <p>15 actually are quite routine for folks to</p> <p>16 demonstrate their capability and the adequacy of</p> <p>17 their systems.</p> <p>18 Q. Has it occurred with respect to books</p> <p>19 to date?</p> <p>20 A. There haven't been that many</p> <p>21 different companies wanting to license book</p> <p>22 content to date, so that sort of competition</p> <p>23 hasn't occurred with books to date. I was</p> <p>24 thinking of construction project performance</p> <p>25 bonds and real estate agent performance bonds</p>	<p style="text-align: right;">Page 219</p> <p>1 each one wanted and was willing to give up; is</p> <p>2 that right?</p> <p>3 MR. BONI: Object to form.</p> <p>4 A. It might. It might be that if Google</p> <p>5 needs to enter into these contracts with</p> <p>6 thousands of publishers, Google's standard</p> <p>7 offer, their stock offer, their opening offer</p> <p>8 and the standard terms and conditions would</p> <p>9 actually become more generous because they</p> <p>10 warned a large number of publishers to accept.</p> <p>11 Q. Do you know what proportion of the</p> <p>12 publishers in the Google Books Partner Program</p> <p>13 are participating pursuant to the terms in</p> <p>14 Exhibit 15 as opposed to other terms?</p> <p>15 A. I don't know.</p> <p>16 Q. Would that fact affect your last</p> <p>17 answer or rather the answer before the answer --</p> <p>18 let me ask a slightly better question.</p> <p>19 Would that fact affect your view of</p> <p>20 the extent to which publishers would in the</p> <p>21 situation you hypothesize in Paragraph 9 of your</p> <p>22 report negotiate for and receive security terms?</p> <p>23 A. It might. But one shouldn't read too</p> <p>24 much into the past because publishers' decision</p> <p>25 to accept the standard terms document in the</p>
<p style="text-align: right;">Page 218</p> <p>1 and the myriad of other contexts in which</p> <p>2 service providers actually do put liquidated</p> <p>3 damages in their contract in order to prove</p> <p>4 their seriousness about providing the required</p> <p>5 performance.</p> <p>6 Q. So it's your view that in the event</p> <p>7 of competition between multiple service</p> <p>8 providers, a market might result in which</p> <p>9 liquidated damages clauses were included in the</p> <p>10 licenses you discussed in Paragraph 9, but they</p> <p>11 might or might not, depending on the market</p> <p>12 dynamics?</p> <p>13 A. I think that's largely consistent</p> <p>14 with my views. To what extent it requires</p> <p>15 competition and many services scanning or</p> <p>16 digitally producing books, I'm not so sure, but</p> <p>17 I do think that if a license were required, if</p> <p>18 agreement from the publisher and/or author was</p> <p>19 required, it would be more likely that the terms</p> <p>20 would end up including provisions favorable to</p> <p>21 the publisher and/or author, and the provisions</p> <p>22 could well include these sorts of security</p> <p>23 benefits.</p> <p>24 Q. But that outcome would depend on the</p> <p>25 particular parties to that negotiation and what</p>	<p style="text-align: right;">Page 220</p> <p>1 past could reflect a variety of factors, causing</p> <p>2 them to accept it even when in reality they</p> <p>3 would have preferred a document rather</p> <p>4 different.</p> <p>5 Q. Does the acceptance of Exhibit 15 by</p> <p>6 many publishers suggest to you that the</p> <p>7 publishers regard the bargain set forth in</p> <p>8 Exhibit 15 as one that is satisfactory?</p> <p>9 MR. BONI: Objection to form.</p> <p>10 There's no foundation for that question, Joe.</p> <p>11 A. That's not the conclusion that I</p> <p>12 would draw from that fact.</p> <p>13 Q. Would you draw any conclusion from</p> <p>14 that fact?</p> <p>15 A. No, I wouldn't -- I would draw a</p> <p>16 different conclusion from that fact.</p> <p>17 Q. What conclusion would you draw?</p> <p>18 A. I would find it evidence of Google's</p> <p>19 market power.</p> <p>20 MR. GRATZ: I'd like to mark as</p> <p>21 Exhibit 16 this document. Actually before I</p> <p>22 mark this as Exhibit 16.</p> <p>23 Q. Are you familiar with something</p> <p>24 called Amazon Search Inside the Book?</p> <p>25 A. Yes.</p>

<p style="text-align: right;">Page 221</p> <p>1 Q. What is it?</p> <p>2 A. It's a program whereby publishers can</p> <p>3 provide copies of their book contents to be</p> <p>4 presented on the Amazon website for users to</p> <p>5 browse or search.</p> <p>6 Q. Have you ever seen the agreement</p> <p>7 governing the terms under which Amazon may use</p> <p>8 the books which are submitted through Search</p> <p>9 Inside the Book?</p> <p>10 A. I think I looked at it once.</p> <p>11 MR. GRATZ: Mark this as Exhibit 16.</p> <p>12 (Document marked as Exhibit No. 16 for</p> <p>13 identification.)</p> <p>14 Q. Is this the agreement governing</p> <p>15 Amazon's use of books submitted through Search</p> <p>16 Inside the Book?</p> <p>17 A. It seems to be. It seems to be at</p> <p>18 least the standard version, and what variance</p> <p>19 might exist, I don't know.</p> <p>20 Q. Does it include the security terms</p> <p>21 that you hypothesize in Paragraph 9 of your</p> <p>22 report?</p> <p>23 A. It includes a portion of them.</p> <p>24 Q. How do the terms of Exhibit 16 differ</p> <p>25 from the agreement that you hypothesize in</p>	<p style="text-align: right;">Page 223</p> <p>1 Do you know how many books are in</p> <p>2 Search Inside the Book by Amazon?</p> <p>3 A. Quite a lot. But I don't know</p> <p>4 specifically.</p> <p>5 Q. Does the existence of Exhibit 16 as</p> <p>6 the terms by which those books are digitized,</p> <p>7 stored and shown to the public change any of the</p> <p>8 views expressed in your report?</p> <p>9 A. No.</p> <p>10 Q. Is Exhibit 16 the sort of agreement</p> <p>11 that you are referring to in the first sentence</p> <p>12 of Paragraph 9 of your report?</p> <p>13 A. It's the sort of agreement; albeit,</p> <p>14 not with the substantive terms that I was</p> <p>15 anticipating. It's a contract between the right</p> <p>16 parties. It has the right kind of title on it.</p> <p>17 Q. What reason do you have to think that</p> <p>18 in the future parties would bargain for</p> <p>19 different terms than they have in Exhibits 15</p> <p>20 and 16?</p> <p>21 A. In the context of Exhibits 15 and 16,</p> <p>22 these are books in print for which the publisher</p> <p>23 might reasonably expect to sell more if they go</p> <p>24 along with the contracts provided in 15 and 16.</p> <p>25 The publisher at least gets something; namely,</p>
<p style="text-align: right;">Page 222</p> <p>1 Paragraph 9 of your report?</p> <p>2 A. Certainly the substantive commitment</p> <p>3 is rather narrow here in Exhibit 16. Amazon</p> <p>4 will employ available technologies to hinder</p> <p>5 downloading. But it's something. It says</p> <p>6 they'll do something, and if they don't, you</p> <p>7 could try to sue them for your actual damages</p> <p>8 that resulted from that breach.</p> <p>9 Q. Does it include liquidated damages</p> <p>10 for breach?</p> <p>11 A. I don't see any liquidated damages.</p> <p>12 I do see the remedy that at least an author or</p> <p>13 publisher can take their books out which is a</p> <p>14 benefit. Better than nothing, from their</p> <p>15 perspective.</p> <p>16 Q. Do you consider that an important</p> <p>17 remedy for an author or publisher?</p> <p>18 A. It's a limited remedy. You know, one</p> <p>19 shouldn't be too effusive in the praise, but the</p> <p>20 alternative is even worse.</p> <p>21 Q. The alternative being the provider</p> <p>22 being deaf to requests for removal?</p> <p>23 A. Correct.</p> <p>24 Q. Does the existence of Exhibit 16 as</p> <p>25 an -- actually strike that.</p>	<p style="text-align: right;">Page 224</p> <p>1 they get the possibility of more sales, thanks</p> <p>2 to these examples being available.</p> <p>3 In contrast, as to older books for</p> <p>4 which there is less likelihood of additional</p> <p>5 sales, maybe books out of print, it's harder to</p> <p>6 see what the publisher's upside is. Furthermore</p> <p>7 here, the publisher gets to choose which</p> <p>8 specific books they want to do it for one by</p> <p>9 one, opting in; whereas, in other contexts, the</p> <p>10 books are chosen by someone else, not by the</p> <p>11 publisher.</p> <p>12 Q. In your previous answer, are you</p> <p>13 distinguishing between a program like Amazon</p> <p>14 Search Inside the Book and unrestricted fair use</p> <p>15 of books or between a program like Amazon Search</p> <p>16 Inside the Book and a future in which the Google</p> <p>17 Library Project is found not to be a fair use?</p> <p>18 MR. BONI: Object to form.</p> <p>19 A. I'm getting a little bit muddled</p> <p>20 here. I think maybe both of those, but there</p> <p>21 might be some part of it that only makes sense</p> <p>22 in one or the other.</p> <p>23 Q. Let me ask this: In the first</p> <p>24 sentence of Paragraph 9 of your report, you're</p> <p>25 discussing the situation in which the Google</p>

Page 225

1 Library Project is found not to be a fair use;
2 is that right?

3 A. Yes.

4 Q. And you're hypothesizing certain
5 terms that would be bargained for as between
6 parties who wanted to make use of the books and
7 copyright-holders of those books in that
8 circumstance; is that right?

9 A. Yes.

10 Q. The terms that you hypothesize in
11 that hypothetical negotiation, in the event the
12 Google Library Project is found not to be a fair
13 use, do they differ from the terms set forth in
14 Exhibit 16?

15 MR. BONI: Object to form.

16 A. Who's to say what the parties might
17 come up with, but the most pro-publisher,
18 pro-author of those terms would certainly differ
19 significantly.

20 Q. And the most pro -- the most pro-user
21 or most pro-Amazon version of those terms would
22 differ from these terms as well?

23 A. I suppose there's a spectrum, and you
24 could go either way on the spectrum.

25 Q. Do you know what the probability --

Page 226

1 so it could be -- it could be -- the negotiation
2 could end up anywhere on the spectrum, is that
3 right, between the most anti-copyright-holder
4 terms and the most pro-copyright-holder terms;
5 is that right?

6 A. It could end up along the spectrum, I
7 suppose, anywhere, although there are factors
8 that might make it more likely to end up on one
9 end or the other end.

10 Q. What is the probability of it ending
11 up on the most anti-copyright-holder end?

12 A. The spectrum doesn't even necessarily
13 have an end. You can always go further, but I
14 think the likelihood is that it would end up
15 somewhere in the middle; whereas, when I look at
16 15 and 16, they look like unilateral contracts
17 drafted by the service providers. They seem to
18 have an awful lot of disclaimers of liability
19 and disclaimers of warranty. They look like
20 they were drafted by Google's lawyers and
21 Amazon's lawyers. I think they look like that
22 because they were, and those lawyers did a good
23 job of representing their clients' interest.

24 Q. So you can't rule out the possibility
25 that the hypothetical negotiation set forth in

Page 227

1 the first sentence of Paragraph 9 of your report
2 would result in precisely the terms set forth in
3 Exhibit 15 or precisely the terms set forth in
4 Exhibit 16?

5 A. That could happen.

6 Q. Indeed, the terms could be worse for
7 the copyright-holders than these or they could
8 be better?

9 A. They could be worse or they could be
10 better.

11 Q. In your view, is one of the factors
12 that would make them better for
13 copyright-holders having an organization making
14 the use that was more sensitive to
15 copyright-holder concerns? Would that make it
16 more likely that the damages and security terms
17 would be in the agreement?

18 A. If the service provider needed this
19 agreement, because absent the agreement they
20 couldn't provide the service they aspire to
21 provide, then they would be more likely to come
22 with hat in hand, willing to bend over backwards
23 in order to make sure that they got the contract
24 that they needed.

25 Conversely, if they thought we don't

Page 228

1 really need this because it's just fair use
2 anyway, we can do what we want; if we get a
3 contract, that's great, if not, that's okay too,
4 well, then they'd be less likely to agree to
5 contract terms that were on the side of the
6 publishers.

7 Q. Do you think the identity of the
8 service provider matters in that a service
9 provider that was affiliated with
10 copyright-holders, for example, would be more
11 likely to include a security term in liquidated
12 damages?

13 MR. BONI: Object to form.

14 A. I think it's probably true that a
15 company that comes from the world of copyright,
16 and has as its constituents its management team,
17 its attorneys, folks who come from that world
18 and that view, would be more likely to be
19 sensitive of the concerns of those constituents.

20 MR. GRATZ: Mark this as Exhibit 17.
21 (Document marked as Exhibit No. 17 for
22 identification.)

23 MR. BONI: Seventeen?

24 MR. GRATZ: Yes, 17.

25 Q. Do you recognize what's been marked

57 (Pages 225 to 228)

Page 229

1 as Exhibit 17?

2 A. I don't.

3 Q. Do you know -- are you aware of
4 something called Back In Print?

5 A. I think so. But I'm not sure
6 specifically. It's well beyond anything I
7 opined on in this report.

8 Q. Are you aware that the Authors Guild
9 is a party to this lawsuit?

10 A. Yes.

11 Q. And that's the party for which you --
12 in favor of whom you submitted your expert
13 report; is that right?

14 MR. BONI: Object to form.

15 A. Yes.

16 MR. BONI: On its face for all
17 plaintiffs, not one as opposed to any other, but
18 if that's the import of your question, Joe.

19 MR. GRATZ: No.

20 MR. BONI: You said "the party," on
21 whose behalf.

22 MR. GRATZ: Sorry. One of the
23 parties on whose behalf.

24 MR. BONI: Right, I understand. I
25 just want it to be clear.

Page 230

1 Q. The author -- that same Authors Guild
2 is one of the parties to the Exhibit 17; is that
3 right?

4 A. Yes.

5 Q. Exhibit 17 is an agreement by which
6 an entity called iUniverse, along with the
7 Authors Guild, can, among other things, make
8 certain books of signatories to this agreement
9 available as eBooks; is that right?

10 A. So it seems.

11 Q. Does Exhibit 17 include any security
12 terms?

13 MR. BONI: When you say --

14 MR. GRATZ: There's a new question
15 pending.

16 A. I don't see any security terms.

17 Q. Are there any liquidated damages
18 terms in exhibit -- are there any liquidated
19 damages terms in Exhibit 17?

20 A. I don't see any.

21 Q. Do the terms of Exhibit 17 differ
22 from the terms you hypothesize in Paragraph 9 of
23 your report?

24 A. As I understand it, so far this is
25 quite a different service than what I was

Page 231

1 contemplating in Paragraph 9 or what we've been
2 discussing in Exhibits 15 and 16.

3 Q. In that this is a service to sell
4 eBooks rather than a service to help people find
5 books?

6 MR. BONI: Object to form. That
7 wholly mischaracterizes the contract which says
8 both print copies and eBook copies. This is not
9 an exclusively eBook program. I mean, let's be
10 accurate here.

11 Q. Let me ask some foundational
12 questions. eBooks are electronic books; is that
13 right?

14 A. Yes.

15 Q. And eBooks are sold through
16 electronic means, at least today; is that right?

17 A. Yes.

18 Q. Through -- through computer networks
19 of one kind or another?

20 A. Yes.

21 Q. And eBook purchases take place
22 frequently through eCommerce websites; is that
23 right?

24 A. Yes.

25 Q. And eBooks are stored on those

Page 232

1 websites, and access is given to those eBooks
2 only after payment is made; is that right?

3 A. Yes.

4 Q. Thus eBooks present a similar
5 security concern as any other service that makes
6 available portions of books under certain
7 circumstances to certain people; is that right?

8 A. Now I'm no longer with you.

9 Q. So do eBooks -- does the offering of
10 eBooks bring with it security concerns?

11 A. It does, but they're different
12 security concerns than the security concerns
13 associated with snippets.

14 Q. They relate to making sure that only
15 the people who should have access to a given
16 work or portion thereof have access to a given
17 work or portion thereof; is that right?

18 A. In the eBooks that I'm familiar with,
19 there's much less of a notion of portion. A
20 user who buys an eBook has access to the
21 entirety of the eBook. Typically, the eBook is
22 a single encrypted file which is provided in its
23 totality to the user for deployment to an eBook
24 reader, and that's the end of that. That
25 security is pretty well understood at this point

58 (Pages 229 to 232)

<p style="text-align: right;">Page 233</p> <p>1 thanks to experience with similar technologies</p> <p>2 in music and movies.</p> <p>3 Q. The provider of eBooks needs to store</p> <p>4 the entire book on its servers; is that right?</p> <p>5 A. Yes.</p> <p>6 Q. It's at least possible that the book</p> <p>7 could be stolen from the servers by one who</p> <p>8 intrudes upon those servers; is that right?</p> <p>9 A. It could happen.</p> <p>10 Q. Do you consider that more or less</p> <p>11 likely than the taking of books from one who</p> <p>12 stores those books who is not an eBook provider?</p> <p>13 A. I think the snippet provider is more</p> <p>14 vulnerable than the seller of eBooks.</p> <p>15 Q. Why?</p> <p>16 A. The snippet provider is offering in</p> <p>17 all likelihood orders of magnitude more</p> <p>18 transactions, giving away a very, very large</p> <p>19 number of free snippets, versus selling a more</p> <p>20 modest number of eBooks. Furthermore, giving</p> <p>21 things away at a cost of zero, the structure of</p> <p>22 the web services that provide that tool uses</p> <p>23 ordinary HTML images, JavaScript, maybe Flash,</p> <p>24 probably not, uses the most standard and</p> <p>25 insecure of web-based systems; whereas, the</p>	<p style="text-align: right;">Page 235</p> <p>1 installed.</p> <p>2 MR. GRATZ: We can change the tape.</p> <p>3 THE VIDEOGRAPHER: Here ends Tape 5.</p> <p>4 Off the record at 4:24 p.m.</p> <p>5 (Brief recess.)</p> <p>6 THE VIDEOGRAPHER: Here begins Tape</p> <p>7 No. 6 in today's deposition of Benjamin Edelman.</p> <p>8 Back on the record. It's 4:31 p.m.</p> <p>9 Q. Turning to Paragraph 11 of your</p> <p>10 report, Paragraphs 11 and 12 discuss the current</p> <p>11 state of book -- eBook piracy; is that right?</p> <p>12 A. Yes.</p> <p>13 Q. This eBook piracy discussed in</p> <p>14 Paragraphs 11 and 12 isn't piracy that's</p> <p>15 occurring via Google Books; is that right?</p> <p>16 A. That's true.</p> <p>17 Q. And it isn't a risk that Google Books</p> <p>18 created; is that right?</p> <p>19 A. That's true.</p> <p>20 Q. And the contents of Paragraph 11 and</p> <p>21 12 would be true whether or not Google Books</p> <p>22 existed; is that right?</p> <p>23 A. That's true, although it's possible</p> <p>24 that Google Books will make the problem worse.</p> <p>25 Q. The files you're referring to, the</p>
<p style="text-align: right;">Page 234</p> <p>1 provision of an encrypted eBook uses highly</p> <p>2 specialized secure file formats designed</p> <p>3 specifically for that purpose.</p> <p>4 Q. Do any popular eBook formats not use</p> <p>5 encryption?</p> <p>6 A. There are some that don't use</p> <p>7 encryption.</p> <p>8 Q. Can one buy unencrypted eBooks from</p> <p>9 Barnes & Noble?</p> <p>10 A. I don't recall one way or the other.</p> <p>11 Q. Can one buy unencrypted eBooks from</p> <p>12 the Google eBooks store?</p> <p>13 A. I'm sure there are some.</p> <p>14 Q. And with respect to those, do the</p> <p>15 risks associated with running that sort of</p> <p>16 service similarly -- are they comparable to</p> <p>17 running a snippet-based or indexing service?</p> <p>18 A. Even then, notwithstanding that the</p> <p>19 file itself is unencrypted, the tasks are just</p> <p>20 rather different to provide a single, large file</p> <p>21 for deployment to the user's reader versus</p> <p>22 providing a snippet in the browser, providing,</p> <p>23 to be sure, orders of magnitude more snippets on</p> <p>24 a per-second basis, just a voluminous task,</p> <p>25 limiting the kinds of security that can be</p>	<p style="text-align: right;">Page 236</p> <p>1 .mobi files, those are files that did not come</p> <p>2 from Google Books; is that right?</p> <p>3 A. That's true.</p> <p>4 Q. Do the pirate sites referred to in</p> <p>5 Paragraphs 11 and 12 offer snippets or whole</p> <p>6 books?</p> <p>7 A. Whole books.</p> <p>8 Q. Why whole books instead of just</p> <p>9 snippets?</p> <p>10 A. Once you're a pirate, there's no need</p> <p>11 to use snippets.</p> <p>12 Q. Is it because the snippets aren't a</p> <p>13 substitute for the whole books?</p> <p>14 MR. BONI: Object to form.</p> <p>15 A. In some circumstances I'm sure the</p> <p>16 snippets are. In others, they might not be.</p> <p>17 Q. In what circumstances would they be?</p> <p>18 A. When one just needs a quote, needs to</p> <p>19 find the book that has a certain distinctive</p> <p>20 phrase, in certain reference contexts, of</p> <p>21 course, whether or not those reference contexts</p> <p>22 would be included in the Google program as</p> <p>23 currently envisioned. There are other contexts</p> <p>24 in which snippets could be sufficient.</p> <p>25 Q. Do you know whether any pirated books</p>

Page 237

1 have ever come from Google's scans?

2 A. I don't know.

3 Q. Turning to Paragraph 13 of your
4 report, it says, "If Google's conduct is found
5 to be a fair use and others engage in similar
6 conduct, the risk is created of book
7 redistribution through piracy." By "similar
8 conduct" do you mean scanning, archiving and the
9 presentation of the portions of books through a
10 web service?

11 A. Yes.

12 Q. Turning to Paragraph 14, you discuss
13 the risk that pirates could extract book copies
14 through defects in the security of a provider's
15 systems; is that right?

16 A. Yes.

17 Q. Is that a risk that, likewise,
18 applies to Amazon's Search Inside the Book
19 service?

20 A. It does.

21 Q. Is it inherent in any sort of digital
22 storage of a digitized book that makes portions
23 of that book available, either sort of -- or
24 makes the whole book available to those who have
25 purchased it?

Page 238

1 A. With the others that we're
2 discussing, for example, Amazon Search Inside
3 the Book or those that sell books reflect a
4 contract, an agreement between the rights-holder
5 that owns rights in the books and the service
6 providers that's distributing it.

7 In contrast, this section
8 contemplates a finding of fair use and others
9 beginning to engage in similar conduct without
10 needing to get that permission, and so the
11 quality and caliber and capability of the folks
12 engaged in this task could be quite different.

13 Q. Does the risk of extraction through
14 defects in the security of a provider's system
15 necessarily depend on whether or not there is an
16 agreement in place regarding security?

17 MR. BONI: Object to form.

18 A. It's not that the agreement itself
19 changes the risks, but that agreements might be
20 entered into only with those whose risks are
21 appropriate, for example, because of their
22 higher level of capability or their higher level
23 of care that they promised to exercise.

24 Q. And the circumstances in which those
25 agreements would be entered into and the terms

Page 239

1 that would be negotiated is a subject that we
2 discussed previously, right?

3 A. Right.

4 Q. Turning to Paragraph 16, you
5 discussed the risk that someone could use a
6 staff member's user name and password to access
7 books; is that right?

8 A. Yes.

9 Q. And that would happen by stealing the
10 service provider's staff member's user name and
11 password and then using it, right?

12 A. That's right.

13 Q. Is the risk you discussed in
14 Paragraph 16 a risk which could be mitigated by
15 two-factor authentication?

16 A. That would mitigate the risk. It
17 wouldn't eliminate it, but it would make some
18 progress.

19 Q. What is two-factor authentication?

20 A. Two-factor authentication is a
21 security practice whereby a user is verified
22 using two distinct, distinctive characteristics,
23 a password perhaps being one, but another also
24 being required.

25 Q. An example of one of those would be a

Page 240

1 one-time code number that appears on a key chain
2 sized screen and changes every once in a while;
3 is that right?

4 A. That's an example.

5 Q. And so the risk hypothesized in
6 Paragraph 16 would be one that service providers
7 who did not use two-factor authentication
8 properly could be subject to; is that right?

9 A. Even two-factor authentication,
10 depending on how it's implemented, could still
11 be subject to this risk, but the risk is more
12 severe when a vendor uses only one-factor
13 authentication.

14 Q. And two-factor authentication would
15 still be subject to this risk because somebody
16 could steal an employee's physical key chain as
17 well as stealing their user name and password;
18 is that right?

19 A. If the second factor was, in fact, a
20 physical key chain, if it was something easier
21 to steal or easier to impersonate, tell me the
22 name of your first pet, something like that, or
23 you're logging in from a computer I recognize,
24 but maybe the attacker can impersonate that
25 computer, it might still be possible.

60 (Pages 237 to 240)

<p style="text-align: right;">Page 241</p> <p>1 Q. Turning to Paragraph 17, it says, 2 "Fourth, a rogue employee could intentionally 3 redistribute book copies." Is that true of any 4 electronic system to which employees of an 5 organization have access? 6 MR. BONI: Object to form. 7 A. It's true that any employee with 8 access to digital works could potentially 9 distribute them. However, in general, employees 10 only have access to the works licensed by their 11 employer for their distribution or resale; 12 whereas, this section as detailed in 13 Paragraph 13 is about companies that might begin 14 to redistribute books pursuant to a finding of 15 fair use and without permission from the 16 rights-holders, an important difference that 17 would greatly expand the number of employees who 18 might potentially have access. 19 Q. Are you aware of any circumstance in 20 which a rogue employee has distributed copies of 21 books from a book-service provider? 22 A. I'm not aware of anything responsive 23 to that specific request. 24 Q. How can that risk be mitigated? 25 A. One way to mitigate is to allow</p>	<p style="text-align: right;">Page 243</p> <p>1 were to exist, but you're right that it's not 2 there. 3 Q. Where would we look for it? 4 A. We're talking about a class of 5 hundreds of thousands of works of market value, 6 God knows how much. I'd want to know how Steven 7 Spielberg secures the pre-release copies of his 8 next big movie, and there, I bet the contract 9 between Spielberg and his movie company and the 10 guy who drives the truck with the master print 11 actually does say something about the way that 12 truck has to be locked and the GPS to be 13 installed on the roof of the truck and the 14 background check required for the driver. I 15 would expect that all of those sorts of things 16 would be discussed in that contract. 17 Q. What's the basis for your previous 18 answer? 19 A. I've read a little bit about that 20 actually during the transition to digital movie 21 distribution, rather than movies being loaded 22 onto trucks. A lot of these questions were 23 reopened and were the subject even of the 24 Wall Street Journal style news coverage. 25 Q. What did you read?</p>
<p style="text-align: right;">Page 242</p> <p>1 rights-holders in books to approve the specific 2 vendors who are holding and distributing their 3 works. 4 Q. How is that -- sorry. 5 A. For example, pursuant to a contract, 6 and the contract could, if the parties so chose, 7 specify background checks or three-factor 8 authentication or authentication by two 9 different people, you need the guy and his 10 manager in order to get the digital file out of 11 repository, or you can only do it during 12 business hours. There are lots of internal 13 controls that could be required through contract 14 if this were pursuant to the contract. 15 Q. Do you know of any book-related 16 contracts that includes those terms? 17 A. I don't know of that in the context 18 of books. 19 Q. And in fact, the three book-related 20 contracts that we've looked at today all do not 21 include those terms; is that right? 22 A. I'm not sure that those contracts 23 each to be exercised by -- to be entered into by 24 an individual publisher, those aren't 25 necessarily where we would look for it if it</p>	<p style="text-align: right;">Page 244</p> <p>1 A. I don't recall specifically. 2 Q. Did you rely on the articles that you 3 referred to in your previous answer in forming 4 the opinions set forth in your report? 5 A. No. 6 Q. Turning to Paragraph 18, in the first 7 sentence you say, "Fifth, when books are scanned 8 by a smaller and less sophisticated provider, 9 there is a particular acute risk of book 10 contents being accessed and redistributed." 11 What do you mean by smaller and less 12 sophisticated? 13 A. Google is fortunate to have ample 14 resources and top-notch technical talents. Not 15 everyone will enjoy those benefits. The 16 discussion in Paragraph 13 at the top of the 17 page contemplates others entering into the book 18 provider sector and potentially doing that 19 without the significant resources that Google is 20 able to bring to bear. 21 Q. What's your basis for saying that 22 smaller companies do not have the capabilities 23 necessary to secure books adequately? 24 A. I'm not sure that those are my exact 25 words, for example, "adequately." But I think</p>

<p style="text-align: right;">Page 245</p> <p>1 it's pretty straightforward that if you have 2 more limited resources, your ability to expand 3 those resources on any given project is going to 4 be correspondently limited. 5 Q. In your view is it necessarily the 6 case that smaller and less sophisticated 7 entities have worse security than larger and 8 more sophisticated entities? 9 MR. BONI: Object to form. 10 A. Not always. Sometimes with simpler 11 systems or with less valuable contents to 12 safeguard, the security of a smaller entity can 13 be more than satisfactory. On the other hand, 14 when one flips around those conditions, a small 15 entity guarding a very large gem, one could 16 quickly get into trouble. 17 Q. Are your statements in Paragraph 18 18 of your report based on a survey of companies of 19 various sizes considering their security 20 measures? 21 A. No. 22 Q. Can you provide an example of one of 23 the smaller and less sophisticated companies to 24 which you refer? 25 A. For example, in the context of domain</p>	<p style="text-align: right;">Page 247</p> <p>1 report, you say that attackers can take 2 advantage of even a brief period when a single 3 book provider is insecure. You see that? 4 A. Yes. 5 Q. Is that true today? 6 A. Today there aren't so many book 7 providers. We've discussed only two today. 8 Both of them large, sophisticated companies with 9 impressive information security defenses; 10 whereas, the premise of this section, 11 Paragraph 13, is that there might be 12 significantly more in the future, and they might 13 look quite different. 14 Q. In the event of a fair use ruling? 15 A. Correct, which has been the premise 16 of the entire section where we've been here. 17 Q. Have you -- so it's your view that 18 today's book providers like Google and Amazon 19 have a different and higher level of security 20 than tomorrow's book providers might in event of 21 a fair use ruling, such that smaller entities 22 would enter the market and present the risks 23 discussed in this section; is that right? 24 A. That's right. 25 Q. Turning to Paragraph 20, you say, "I</p>
<p style="text-align: right;">Page 246</p> <p>1 names, there used to be one company, VeriSign 2 Network Solutions that was the sole vendor of 3 .com domain names. When that market was opened 4 up to competition, there were a variety of 5 benefits, but there have also been some 6 downsides, including that some of the smaller 7 guys have been hacked in various ways, have 8 allowed their servers to be taken down by 9 something as routine as a power outage and have 10 otherwise failed to lived up to their 11 contractual commitments. In contrast, the 12 larger vendors in that space have largely 13 succeeded in living up to their contractual 14 commitments. 15 Q. Are you aware of any in The Book 16 Space? 17 MR. BONI: Do you understand the 18 question? 19 A. I do, but I think it's a little bit 20 speculative at this point that there aren't that 21 many smaller sites holding digital copies of 22 books and presenting them in snippet form. If 23 there are any small such companies, I guess I 24 don't know about them. 25 Q. Turning to Paragraph 19 of your</p>	<p style="text-align: right;">Page 248</p> <p>1 understand that the Google Library Project 2 includes providing to the library partners a 3 full digital copy of the books the libraries 4 allowed Google to scan. Breaches at the 5 security systems at these libraries" -- excuse 6 me -- "breaches in the security systems at these 7 libraries, could facilitate book piracy." Do 8 you know what security systems the libraries who 9 store books such as the University of Michigan 10 have in place? 11 A. I don't know about all of the 12 security systems that they have. 13 Q. How do they compare to the security 14 systems that, for example, iUniverse which is 15 the party to the agreement in Exhibit 17 has in 16 place? 17 MR. BONI: Object to form. He just 18 said he's not sure what the security systems are 19 in the libraries. 20 A. I'm also not sure what the security 21 systems are at iUniverse, so I really don't 22 think I can make a comparison. 23 Q. You, likewise, couldn't make a 24 comparison to the security systems that Google 25 or Amazon has in place?</p>

Page 249

1 A. I don't know everything that I'd want
2 to know in order to make that comparison. In
3 general, I think there's good reason to suspect
4 that the libraries will have significantly lower
5 levels of security.

6 Q. But you don't know one way or the
7 other?

8 A. I don't know one way or the other,
9 and furthermore, I'm not sure the answer is
10 knowable just yet. We need to think about what
11 level of security libraries will have several
12 years from now. It's hard to say, sitting here
13 today what they'll do in several years.

14 Q. Are you aware of any books being
15 pirated or stolen from a research library
16 archived with scans made by Google?

17 A. No.

18 Q. Turning to Paragraph 21, you say,
19 "I've not been informed of all the ways that
20 libraries intend to use the book contents data
21 they receive from Google, nor have I been
22 informed how libraries intend to secure that
23 data. But the information currently available
24 indicates that libraries' actions present a risk
25 of book piracy." You see that?

Page 250

1 A. Yes.

2 Q. You don't know what security measures
3 the libraries have in place today; is that
4 right?

5 A. I don't know all of what they have in
6 place.

7 Q. What do you mean by "information
8 currently available" as you use it in Paragraph
9 21?

10 A. Yes, in Exhibit C, I cite the
11 Hathitrust materials which I did review. That
12 gives some information about some of the
13 libraries' security systems. I actually have
14 quite a bit of experience with library
15 information systems from the Multnomah County
16 Public Library case that we discussed
17 previously.

18 I've spent time interviewing
19 librarians. I've spent time with the CIOs of
20 libraries. I've spent time in the library
21 computer systems, understanding how they work
22 and how they interoperate and have come to have
23 a general understanding of the overall culture
24 and approach to information sharing that's
25 common in libraries.

Page 251

1 Q. Did any of your work on the Multnomah
2 County case or the interviews with librarians
3 and other librarian staff members in that case
4 form a basis for any of the opinions you render
5 in your report in this case?

6 A. It's not a basis. It's part of my
7 overall professional background consistent with
8 expert service.

9 Q. Do you know whether the University of
10 Michigan is storing book scans in its normal
11 library information systems or in a separate
12 system?

13 MR. BONI: Object to form.

14 A. I don't know one way or the other.

15 Q. What information, additional to the
16 information you have about the library's
17 security measures, would permit you to better
18 assess the risks?

19 MR. BONI: What risks?

20 Q. The risks you discussed in Paragraphs
21 20 and 21.

22 A. Understanding both what they do now
23 and what they will do in the future, what they
24 commit in some sort of a binding contractual
25 sense to do or not to do. I need to understand

Page 252

1 the servers on which the data is to be stored,
2 the physical security, the network security, the
3 logical security, software level, user accounts,
4 credentialing.

5 This sounds like a full security
6 audit. I'm not sure I'm the best person to do
7 it, but in any event, it requires understanding
8 quite a bit about their practices, both in the
9 present and their future practices, which is a
10 little bit harder to investigate in
11 anticipation.

12 Q. Turning to Paragraph 22, you refer to
13 a student who used MIT library access to
14 download 4.8 million articles and other
15 documents. You see that?

16 A. Yes.

17 Q. Is that man named Aaron Swartz?

18 A. Yes.

19 Q. Aaron Swartz is being charged
20 criminally for that activity; is that right?

21 A. Yes.

22 Q. And those charges are currently
23 pending; is that right?

24 A. That's my understanding.

25 Q. What was the effect on the value of

63 (Pages 249 to 252)

Page 253

1 the articles from Mr. Swartz' actions?

2 A. As I understand it, Mr. Swartz copied
3 the articles but didn't redistribute them at
4 all. I'm not sure he even got around to
5 analyzing them. The effect from those actions
6 is probably minimal. It's probably zero.

7 On the other hand, had Mr. Swartz
8 sent them all to WikiLeaks or put them all on
9 BitTorrent, the consequences could have been
10 absolutely devastating, and I don't think it
11 would have been very hard for him to do that,
12 once he got the 4.8 million files sitting on his
13 hard drive. I think it would have been less
14 than an hour of additional work for him.

15 Q. Do you know Aaron Swartz?

16 A. I've met him.

17 Q. Do you charge for access to your
18 blog?

19 A. No.

20 Q. Why not?

21 A. I'm happy to give it away. Anyone
22 who wants to read my blog is welcome to do so.

23 Q. Would the distribution of articles
24 from your blog on BitTorrent harm the market for
25 those posts?

Page 254

1 MR. BONI: Object to form.

2 A. I would be disappointed and unhappy
3 if someone put my articles on BitTorrent. As to
4 the market for it, I'm not sure, because I don't
5 sell these materials. It's hard to think about
6 what the concept of the market even means here.

7 Q. Would the answer be the same with
8 respect to your published journal articles?

9 A. Well, there, I don't sell them,
10 although the journal publisher does, which is
11 sometimes a source of some contention. I might
12 prefer that they gave it away, in fact, and they
13 might prefer to charge for it. So it's kind of
14 a messy one.

15 If I found those on BitTorrent -- I'm
16 fortunate in that all of my articles actually
17 can be obtained for free from my
18 website because I've arranged that -- so it
19 wouldn't make a whole lot of difference to me,
20 but again, I'm in a very special situation,
21 thanks to other sources of revenue.

22 Q. Turning to Paragraph 23, you refer to
23 JSTOR; do you see that?

24 A. Yes.

25 Q. Do you have articles posted on JSTOR?

Page 255

1 A. I think some of my articles are in
2 JSTOR.

3 Q. Have you done anything to insure the
4 security of JSTOR's systems?

5 A. I have not. I leave that to JSTOR.

6 Q. Do you know whether JSTOR's systems
7 are more or less secure than Google's?

8 A. I think there are some respects in
9 which they are more secure and some respects in
10 which they are less secure.

11 Q. What are the respects in which they
12 are less secure? Let me ask a slightly better
13 question.

14 What are the respects in which, in
15 your view, JSTOR systems are less secure than
16 Google's?

17 A. I would expect that Google has more
18 staff dedicated to security, to making sure that
19 all of their servers are patched with the latest
20 security updates, generally to treating security
21 as the high priority that it should be. JSTOR,
22 in contrast, I would think, has fewer resources
23 to have a dedicated security team to have
24 round-the-clock monitoring and so forth.

25 Q. Do you know of any instances in which

Page 256

1 content providers allow their licensed content
2 to be placed on university servers?

3 A. Yes.

4 Q. What instances are you aware of?

5 A. Typically, in exchange for payment of
6 a fee.

7 Q. What types of content are involved in
8 those transactions that you're aware of?

9 A. Journal articles, groups of journal
10 articles, books, groups of books, periodicals,
11 almost any sort of printed media or electronic
12 media could be subject to such a license.

13 Q. Do all content providers who allow
14 such content to be placed on university servers
15 require oversight of the university's
16 information security implementation?

17 A. Do you all of them require it? I'm
18 sure there are some who don't require it,
19 particularly for the right price. If you pay
20 enough, they won't necessarily ask any more
21 questions.

22 Q. Do you know whether any content
23 providers who allow content to be placed on
24 university servers require oversight of the
25 university's information security

64 (Pages 253 to 256)

Page 257

Page 259

1 implementation?

2 A. I know that some of them do. For
3 example, the one where we're sitting right now
4 does have exactly that requirement.

5 Q. By "the one where we're sitting right
6 now," what do you mean?

7 A. I mean Harvard Business School
8 Publishing provides information products on a
9 licensed basis, but oversees some aspect of the
10 security of the licensees' servers.

11 Q. What aspect of security of the
12 licensees' servers does it oversee?

13 A. It oversees the requirement that a
14 user name and password are provided before
15 access is available and specifically searches
16 for and affirmatively pursued anyone who posts
17 files in a way that's available to the general
18 public.

19 Q. Anything else?

20 A. I think there are some additional
21 requirements. There's a team of multiple,
22 full-time employees who do nothing but this all
23 day. Actually I do know of some additional
24 requirements that they impose.

25 Q. What are those?

Page 258

1 A. They disallow libraries from
2 collecting our case materials. A library can't
3 buy these. If a library did buy them, they
4 would be subject to for-sale rights, but a
5 library is ineligible to purchase. And in order
6 to make a purchase, you must certify that you're
7 not a library, which offers additional
8 protection to prevent this valuable,
9 intellectual property from being distributed in
10 a way that they prefer to prevent.

11 Q. You wrote a case study on Google; is
12 that right?

13 A. The -- I would present it in the
14 following way: I updated someone else's case
15 study to a sufficient extent, changing enough of
16 the sentences and enough of the paragraphs that
17 it was deemed a new document and given a new
18 document number. I would still characterize it
19 as an update and a revision.

20 Q. Do you know how much it cost to
21 purchase a PDF of that case study from Harvard
22 Business School Press website?

23 A. I think it's 4 and \$6. There are
24 some discounts available.

25 Q. I think it's six ninety-five.

1 A. It's a good case.

2 Q. Is it posted on your website?

3 A. It is not.

4 Q. Have you done anything to insure the
5 information security of Harvard Business School
6 Press?

7 A. I've offered them some advice on
8 various aspects of their information, security
9 and their user interface and multiple other
10 facets of their business. Acting more as a
11 friend and colleague than as an author wanting
12 to protect my interests. It doesn't really
13 matter to me how many copies they sell. My
14 royalties are pretty small either way. So I'm
15 not thinking about it from that purpose.

16 Q. Turning to Paragraph 24 of your
17 report, you discuss libraries permitting
18 researchers to copy books in their entirety
19 under the researcher's systems; is that right?

20 A. Yes.

21 Q. Do you know whether any of the
22 libraries to whom Google has -- with whom Google
23 has cooperated in the Library Project have
24 permitted researchers to store digital copies of
25 books on their own computers rather than on

Page 260

1 secured servers?

2 A. I don't know.

3 Q. The type of research that you
4 describe in Paragraph 24, analyzing patterns in
5 book text, can you name any researchers who are
6 engaged in that type of research?

7 A. I know that there are some. I've
8 read some of the papers, but I don't have their
9 names on the tip of my tongue.

10 Q. Have you ever engaged in such
11 research yourself?

12 A. I haven't analyzed patterns in book
13 texts. I certainly have used large data sets
14 obtained from library-based data set archives.
15 I've had to learn the processes for obtaining
16 that and analyzing that.

17 Q. Have you ever spoken with a
18 researcher doing analysis of book text?

19 A. I think so. We've had at least one
20 come to campus for a seminar, and I spoke to him
21 pursuant to that.

22 Q. When was that?

23 A. Within the last two years.

24 Q. Did you talk to any in connection
25 with this report?

65 (Pages 257 to 260)

Page 261

Page 263

1 A. No.

2 Q. Did you do a survey of book text
3 analysis researchers to find out how they would
4 want to use book text in their research?

5 A. No.

6 Q. What is your view as to the
7 probability that the library would permit a book
8 text analysis researcher to copy the entire text
9 of a large corpus of books onto their own
10 computers in terms of a percentage?

11 A. I think it would be unlikely that any
12 library would allow that right now during the
13 pendency of this litigation, given the
14 significant concerns that are extant right now.

15 On the other hand, my experience with
16 other aspects of information security and
17 library information security is that there tends
18 to be a decrease over time where folks become
19 more liberal as they become more confident, and
20 sometimes that confidence turns out to be
21 misplaced confidence. I have some specific
22 examples in mind.

23 Q. What examples are those?

24 A. For example, sticking with the
25 Harvard Business School, it used to be that when

Page 262

1 we sold an electronic copy of a case, we sold it
2 in a special encrypted format that required that
3 you install a reader, not the PDF reader. You
4 had to get from us a special reader, and that
5 reader had a variety of special purpose
6 functions that would prevent you from printing
7 it, prevent you from showing it on a computer
8 connected to a projector, prevent you from
9 taking a screen capture image. It had a number
10 of security features.

11 Later, we decided to abandon that
12 software because it was unpleasant for users to
13 install a special purpose program and have
14 subsequently found that while our new
15 replacement is much more convenient to users, it
16 has created a certain amount of piracy, which is
17 a source of some concern.

18 Q. Does the risk set forth in Paragraph
19 24 of your report exist at Amazon today?

20 MR. BONI: At Amazon?

21 MR. GRATZ: Yes.

22 A. Gee, I really don't think so. I
23 hadn't been thinking of that as a risk that
24 would occur with Amazon today.

25 Q. Does Amazon engage in analysis or

1 research on the text of books?

2 A. Amazon has limited automated analysis
3 of specific fixed factors that are embodied in
4 known proven code designed by professional
5 full-time Amazon engineers who did this once and
6 then leave it running. I'm thinking about, for
7 example, the statistically improbable phrases
8 analysis that Amazon at least previously ran on
9 most books.

10 In contrast, what we were discussing
11 in Paragraph 24 is ad hoc analysis by professors
12 who come and go, students who come and go,
13 visiting researchers who really come and go all
14 in the context of a library relationship where
15 there's much less of a culture of supervision,
16 management and oversight when compared to
17 professional engineers designing software.

18 Q. That's not a necessary but instead
19 only a potential result of a fair use finding in
20 this case; is that right?

21 A. I didn't mean Paragraph 24 to be
22 limited to a fair use finding. Right now the
23 data sitting in libraries could already be
24 analyzed in this way and could give rise to the
25 sorts of problems discussed in Paragraph 24,

Page 264

1 even prior to a court's fair use finding one way
2 or the other.

3 Q. Do you know whether problems of this
4 type have occurred?

5 A. I don't.

6 Q. Have you done anything to try and
7 find out?

8 A. I asked Mr. Boni.

9 Q. What did he tell you?

10 A. I think he told me he didn't know of
11 any specifically.

12 Q. Turning to Paragraph 25, have you
13 ever heard of a prank involving book piracy?

14 A. I've heard of a prank involving other
15 kinds of piracy.

16 Q. What other kinds of piracy?

17 A. For example, when I went to the MIT
18 Hack Gallery, I found quite a few that involved
19 use of other company's trademarks which might or
20 might not be trademark infringement, depending
21 on whether or not a fair use defense would
22 apply.

23 Q. Can you tell me about the Apple -- so
24 in Paragraph 25 you refer to an Apple -- the
25 Apple -- a prank involving the Apple logo?

66 (Pages 261 to 264)

Page 265

Page 267

1 A. Yes.

2 Q. Do you consider that to be in
3 violation of intellectual property rights?

4 A. I think it's an infringement of the
5 trademark, and the question is whether a fair
6 use defense applies. There is a doctrine of
7 fair use for trademarks and stylized images. I
8 think it's a plausible fair use defense. There,
9 I'd really have to apply the factors and read
10 the cases. I'm much less familiar with the Fair
11 Use Doctrine as it applies to stylized images
12 and logos.

13 Q. The Apple prank which you refer
14 occurred in October of 2011; is that right?

15 A. I don't recall.

16 Q. Did it occur shortly after the death
17 of Steve Jobs?

18 A. If you say so.

19 Q. Did students display the Apple logo
20 in the clock tower of Maseeh Hall at MIT in
21 honor of Steve Jobs in the prank you referred to
22 in Paragraph 25?

23 A. Now, that could be. I don't recall.

24 Q. Do you think that that prank is
25 relevant to the issues in this case?

1 of 2004?

2 A. I don't know.

3 Q. Did it occur when the Red Sox made it
4 to the World Series?

5 A. I don't know.

6 Q. Were the -- do you think that the
7 students celebrating the Red Sox making it to
8 the World Series by displaying the logo on the
9 dome of the university building was intellectual
10 property infringement?

11 A. The law is what it is, and it's not
12 for me to rewrite trademark law. I wouldn't be
13 surprised if that is infringement as a matter of
14 law, and fair use defense might or might not
15 apply. It wouldn't shock me if you said that to
16 do that a license must be paid to the Red Sox,
17 and if you don't pay it, then you're in
18 violation of the law.

19 MR. GRATZ: Mark as Exhibit 19, this
20 document. I want to note for the record before
21 I hand it to the witness that despite the
22 confidential legend at the bottom of this
23 document, this is not a confidential document.

24 (Document marked as Exhibit No. 18
25 for identification.)

Page 266

Page 268

1 A. I can certainly see how it would seem
2 peripheral. On the other hand, the fact that
3 students are well known to disregard
4 intellectual property is anything but
5 peripheral. It's well known that Napster was
6 most used on college campuses. There were
7 distinctive trends. You could see the number of
8 users signed into Napster decrease when major
9 schools went onto spring break. So the
10 relationship between students, university
11 libraries and piracy is not peripheral.

12 Q. Could you tell me about the Red Sox
13 logo prank you referred to in Paragraph 25?

14 A. I don't recall. I went through the
15 site, looked at the distinctive images
16 memorializing the pranks, but I didn't note them
17 in great specificity.

18 Q. Do you consider that an instance of
19 piracy?

20 A. I'm not sure. I do think it's
21 probably an instance of trademark infringement,
22 and it might be subject to a fair use defense.

23 Q. The prank you referred to in
24 Paragraph 25 with respect to the logo of the
25 Boston Red Sox, did that prank occur in October

1 Q. You have before you what's been
2 marked as Exhibit 18. Do you recognize this
3 document?

4 A. Yes.

5 Q. Is this the document to which you
6 refer in Paragraph 26 of your report?

7 A. I think so.

8 Q. Do you know what security measures
9 the University of Michigan has in place?

10 A. That's discussed in part in this
11 document.

12 Q. Aside from this document, do you have
13 any knowledge other than what is in this
14 document of security measures that the
15 University of Michigan has in place?

16 A. Aside from what's discussed in this
17 document, I don't think I have knowledge of
18 their current security.

19 Q. Is it your opinion that an author
20 would not agree to have his work stored by the
21 University of Michigan without greater security
22 terms than those set forth in Exhibit 18?

23 MR. BONI: Object to form.

24 A. I'm not sure. It all depends on what
25 the author gets in exchange. If they get zero,

67 (Pages 265 to 268)

<p style="text-align: right;">Page 269</p> <p>1 it might be a pretty tough sell. If you give 2 them some money, that could be quite different. 3 Q. Can you -- do you have an assessment 4 of the probability that an author without 5 further payment would agree to the terms in 6 Exhibit 18? 7 A. I don't know. I'm sure some would 8 and some wouldn't. 9 Q. Referring to the terms of Exhibit 18 10 at the end of Paragraph 26 of your report, you 11 say that, "These vague provisions offer 12 significantly lower protection than Google 13 provides for even its routine business 14 confidences." Do you see that? 15 A. Yes. 16 Q. Do you mean that in terms of the 17 security required for the protection of the 18 information? 19 A. I meant to reference the comparisons 20 cited in Footnote 9 for which I note differences 21 in the circumstances in which information can be 22 shared, restrictions on recipients and 23 requirements as to security. I believe that the 24 Google NDA cited in Footnote 9 actually offers 25 greater protections, at least greater</p>	<p style="text-align: right;">Page 271</p> <p>1 A. All right, I'll need just a moment. 2 I've done half of it. I need to find two 3 different provisions, and I'm working on the 4 second. 5 So we are comparing Provision 3 of 6 Exhibit 19 with Provision 4.4.1 of Exhibit 18. 7 Q. Okay. And how are those -- what's 8 the difference that you intended to identify? 9 A. Well, I said there are greater 10 restrictions on the circumstances in which 11 information can be shared; to wit, I think the 12 Exhibit 19 NDA doesn't allow information to be 13 shared, and the Exhibit 18 provision does allow 14 information to be shared. 15 Q. Within the confines of copyright law; 16 is that right? 17 A. Well, I'm not sure. Perhaps even 18 beyond the confines of copyright law. 19 Q. I direct your attention to Part 4.1 20 of Exhibit 18. 21 A. Fair enough. That section says at 22 least that this will be within the confines of 23 copyright law. 24 Q. So that takes care of sharing. 25 Certainly a nondisclosure agreement requires no</p>
<p style="text-align: right;">Page 270</p> <p>1 specificity than what we see in Exhibit 18. 2 MR. GRATZ: I'd like to mark as 3 Exhibit 19 this document. 4 (Document marked as Exhibit No. 19 for 5 identification.) 6 Q. Do you recognize what's been marked 7 as Exhibit 19? 8 A. Yes. 9 Q. What is it? 10 A. It's the document cited in the 11 Footnote 9. 12 Q. Do you know whether this is a 13 nondisclosure agreement which has been entered 14 into by Google and various parties? 15 A. It purports to be. 16 Q. Do you know whether it, in fact, is? 17 A. I know that when I visited the Google 18 campus twice at the invitation of Google staff, 19 I was presented with a similar NDA, which in at 20 least one instance I refused to sign, perhaps in 21 both instances. 22 Q. Could you identify for me the more 23 precise requirements as to how information must 24 be secured in Exhibit 19 as compared to Exhibit 25 18?</p>	<p style="text-align: right;">Page 272</p> <p>1 sharing, and Exhibit 18 permits sharing under 2 certain circumstances. The question I asked is 3 with respect to precise requirements as to how 4 information must be secured. 5 A. Yes. So in the NDA, Exhibit 19, the 6 second sentence of Provision 3 calls for the 7 same degree of care, no less than a reasonable 8 degree of care as used with respect to the 9 participants' own similar information, and it 10 continues, they must prevent, they must try to 11 prevent, they must actually do it. Sounds like 12 strict liability. 13 MR. BONI: Say where you are. 14 A. Within Clause 3, somewhere around 15 there. Must actually succeed in doing the tasks 16 detailed within A and B of that second sentence. 17 Q. I'm not seeing the words "must 18 prevent." I'm sorry. 19 A. The word "prevent" is on the fifth 20 line of -- 21 Q. And followed with a colon? 22 A. Yes. 23 Q. So "Participant will use the same 24 degree of care, but no less than a reasonable 25 degree of care, as participant uses with respect</p>

Page 273	Page 275
<p>1 to its own similar information to protect the 2 confidential information and to protect -- 3 prevent." 4 So you understand "prevent" in 5 Exhibit 19, the "prevent" immediately before 6 that colon to be an absolute requirement, not a 7 requirement subject to the degree of care 8 previous -- previously in that sentence? 9 A. You know, when I first read this, I 10 thought it was subject to the degree of care 11 previously in the sentence. When I just 12 characterized it orally a moment ago, I thought 13 it was strict liability. Now I'm back to the 14 first interpretation which I think may have been 15 right all along. So -- 16 Q. At any rate, you're saying that this 17 requires the same degree of care as the 18 participant used with respect to its own similar 19 information and that Exhibit 18 does not; is 20 that right? 21 A. That's my recollection, and now we 22 can go back to 4.4.1. The 4.4 -- 23 Q. So and 4.4.1 says U of M shall also 24 make reasonable efforts to prevent third parties 25 from downloading or otherwise obtaining any</p>	<p>1 withstanding the very, very limited commitments 2 in the second sentence. 3 Q. I want to turn to Paragraphs 27 4 through 32 of your report. 5 MR. BONI: Done with these for now, 6 Joe? 7 MR. GRATZ: Yes, you can set those 8 aside. 9 Q. In Paragraphs 27 through 32, you 10 describe a number of flaws in Google's systems 11 which were identified. Did any result in 12 piracy? 13 A. I didn't choose any of the flaws that 14 resulted in piracy. 15 Q. Are there other flaws of which you're 16 aware that did result in piracy? 17 A. Yes. 18 Q. Which flaws are those? 19 A. The Google YouTube service, by 20 Google's own evaluation prior to acquiring 21 YouTube, was a massive source of privacy. 22 MR. BONI: Piracy. 23 A. Of piracy, excuse me. 24 Q. Was that as the result of security 25 breaches or because people were uploading</p>
Page 274	Page 276
<p>1 portion of the U of M digital copy for 2 commercial purposes, redistributing, etcetera. 3 So you're drawing the distinction between taking 4 reasonable measures and using no less than a 5 reasonable degree of care as participant uses 6 with respect to its own similar information? 7 A. It's the -- it's that last part, what 8 they do for their own similar information that 9 first seems stricter. Secondly, a preceding 10 sentence in 4.4.1, implementing technological 11 measures, e.g. robots.txt -- technological 12 measures, e.g. robots.txt, to restrict automated 13 access seemed sort of laughable to me because 14 that's a known defective measure, and if one 15 were serious about blocking automated access, 16 Google is probably the world expert on having to 17 do that properly, and it's not via robots.txt. 18 Q. You're referring to the second 19 sentence of 4.4.1? 20 A. That's right. 21 Q. Does the second sentence of 4.4.1 22 limit the commitment made in the third sentence 23 of 4.4.1? 24 A. No. There are additional 25 commitments, so the third sentence stands, not</p>	<p>1 infringing videos to YouTube? 2 A. It was a result of a design flaw. 3 Q. What was the design flaw? 4 A. The design flaw had several 5 manifestations, but it included the absence of a 6 report piracy button, a button that was tested 7 temporarily until it was removed in haste by 8 YouTube managers who realized that too many 9 users were reporting piracy. 10 Q. How do you know that? 11 A. That was all in Google documents 12 provided in the Viacom litigation and then 13 unsealed and made available for public review. 14 Q. Are those documents -- do those 15 documents form the basis for any of the material 16 in your report? 17 A. No. I relied on other Google design 18 flaws and security breaches to form the 19 conclusion in my report. 20 Q. And the design flaws that you're 21 alleging with respect to YouTube are not design 22 flaws that resulted in the unauthorized breach 23 of security measures which permitted piracy, but 24 instead, in your view, were measures that were 25 designed to -- strike that.</p>

Page 277	Page 279
<p>1 MR. BONI: Good idea.</p> <p>2 Q. Start that question over.</p> <p>3 The design flaws that you referred to</p> <p>4 with respect to YouTube, were they, in your</p> <p>5 view, design flaws that resulted in the breach</p> <p>6 of security measures?</p> <p>7 A. These were not design flaws that</p> <p>8 resulted in the breach of security measures.</p> <p>9 Instead these design flaws resulted in the</p> <p>10 massive and unprecedented copyright infringement</p> <p>11 of a large number of copyrighted video and audio</p> <p>12 recordings.</p> <p>13 Q. Do you know of any instance in which</p> <p>14 third-party copyrighted material has been stolen</p> <p>15 from Google servers?</p> <p>16 A. I'm not sure what you mean by "stolen</p> <p>17 from Google servers."</p> <p>18 Q. I mean taken from Google servers</p> <p>19 without Google's authorization?</p> <p>20 MR. BONI: Object to form. Same</p> <p>21 ambiguity.</p> <p>22 A. There are multiple tools for, quote</p> <p>23 unquote, YouTube stealing. Often they have</p> <p>24 names like "YouTube stealer." These are</p> <p>25 programs that allow a user to take the video and</p>	<p>1 report, you say that outside hackers could</p> <p>2 access or redistribute book contents. Do you</p> <p>3 know of any instances in which hackers have</p> <p>4 accessed or redistributed books from Amazon?</p> <p>5 A. I have heard of that happening.</p> <p>6 Q. Was that following the download of a</p> <p>7 Kindle eBook file?</p> <p>8 A. That's one mechanism by which it can</p> <p>9 happen, but not the only mechanism.</p> <p>10 Q. What other mechanisms are you</p> <p>11 familiar with?</p> <p>12 A. I understand that it is possible to</p> <p>13 use Search Inside the Book to browse selected</p> <p>14 pages later or another user or another computer</p> <p>15 to browse other pages and for the book to be</p> <p>16 stitched together, and I have found programs</p> <p>17 that purport to do that all, although I wasn't</p> <p>18 able to verify the efficacy of those programs.</p> <p>19 Q. Notwithstanding the existence of</p> <p>20 those programs, publishers keep their books in</p> <p>21 Search Inside the Book, to your knowledge; is</p> <p>22 that right?</p> <p>23 A. Yes.</p> <p>24 MR. GRATZ: Let's change the tape.</p> <p>25 THE VIDEOGRAPHER: Here ends Tape</p>
Page 278	Page 280
<p>1 audio of a recording on YouTube and save it to a</p> <p>2 file on their hard drive, so that, for example,</p> <p>3 they can watch it on airline, or they can</p> <p>4 continue to watch it, even if the file is</p> <p>5 removed from YouTube, and they can watch it</p> <p>6 without advertisements. Those programs exist.</p> <p>7 Google seems to have a bit of a cat</p> <p>8 and mouse program with them, where Google is the</p> <p>9 cat, but it doesn't always catch the mouse.</p> <p>10 I've confirmed repeatedly that they work, and</p> <p>11 that Google has been less than effective in</p> <p>12 stomping them out.</p> <p>13 Q. How have you confirmed that they</p> <p>14 work?</p> <p>15 A. I've attempted to use them from time</p> <p>16 to time.</p> <p>17 Q. Do you know of any such tools with</p> <p>18 respect to books?</p> <p>19 A. I've looked for such tools and</p> <p>20 couldn't find them in the first few minutes of</p> <p>21 searching.</p> <p>22 Q. Did you continue past the first few</p> <p>23 minutes of searching?</p> <p>24 A. Not really.</p> <p>25 Q. Turning to Paragraph 34 of your</p>	<p>1 No. 6. Off the record 5:33 p.m.</p> <p>2 (Brief recess.)</p> <p>3 THE VIDEOGRAPHER: Here begins Tape</p> <p>4 No. 7 in today's deposition of Benjamin Edelman.</p> <p>5 Back on the record, 5:41 p.m.</p> <p>6 Q. Turning to Paragraph 36 of your</p> <p>7 report, you say, "A single breach of the systems</p> <p>8 that store book contents could allow book</p> <p>9 contents to become ubiquitous online." What is</p> <p>10 the basis for your statement?</p> <p>11 A. There's an expression about putting</p> <p>12 the genie back in the bottle. I think that</p> <p>13 applies in spades here. I give two examples in</p> <p>14 the paragraph: AOL search data that should</p> <p>15 never have been put on the Internet and U.S.</p> <p>16 State Department wires that again should never</p> <p>17 have seen the light of day. Once those</p> <p>18 materials make it onto the Internet, as we all</p> <p>19 well know, there's no taking them off the</p> <p>20 Internet and so too here.</p> <p>21 Q. What's your basis for thinking that</p> <p>22 the AOL search data is the still available on</p> <p>23 BitTorrent?</p> <p>24 A. I checked.</p> <p>25 Q. Do you possess a copy of that file?</p>

Page 281	Page 283
<p>1 A. I've downloaded it maybe more than 2 once. I wouldn't be surprised if I still have a 3 copy floating around. 4 Q. With respect to WikiLeaks, what's 5 your basis for saying the information is 6 available? 7 A. I've read other sources indicating 8 that it's available, although I actually haven't 9 checked personally in any great detail. 10 Q. Have you downloaded any of the 11 WikiLeaks cables yourself? 12 A. I should be clear, I've read it at 13 the New York Times site, for example. So to the 14 extent that you can read the primary sources 15 there, as you can often, and in significant 16 quantities, I've read some of them there. 17 Q. Have you read them anywhere else? 18 A. Maybe other mainstream major media 19 publications. 20 Q. How large is the AOL search data in 21 megabytes approximately? 22 A. Approximately one gigabyte. 23 Q. How large do you estimate that 24 scanned images of 20 million books would be? 25 A. Scanned images would be much larger,</p>	<p>1 book contents being available, the likelihood 2 rather than the magnitude of the harm larger if 3 there were a proliferation of book scanners? 4 MR. BONI: Object to form. You can 5 answer. 6 A. It makes the probability larger. 7 Q. Does it affect the magnitude of the 8 harm? 9 A. The magnitude also, I would expect, 10 to be larger in this context. In the context of 11 Search Inside the Book, only a portion of books 12 are available. I understand that the number of 13 books there available is smaller than the number 14 of books here at issue, and those, of course, 15 are publishers and authors who made the 16 considered decision to go down that route; 17 whereas, here no one was asked. 18 Q. Does Amazon store the entirety of 19 books in Search Inside the Book? 20 MR. BONI: Object to form. 21 A. I don't know. I would think they'd 22 need to store either all of it or most of it. 23 Q. And if Amazon's entire corpus of 24 digitized books, including, for example, their 25 eBooks were taken and distributed in the manner</p>
Page 282	Page 284
<p>1 although after OCR, they might become much 2 smaller. I would think a few gigabytes of text 3 after OCR would probably be about right. 4 MR. BONI: I just want to place an 5 objection on the record that it's a slightly 6 misleading question. We're not talking about 7 20 million in-copyright books or books that fall 8 under the class definition. That's a much lower 9 number. 10 Q. Is the risk associated with a single 11 breach of all books resulting in the genie 12 coming out of the bottle, as you say, a risk 13 that also exists with any other digitized corpus 14 of a large number of books? 15 MR. BONI: Object to form. 16 A. The risk differs in some important 17 respects from the other corpuses we've talked 18 about, such as Amazon Search Inside the Book. 19 Q. How does it differ? 20 A. First, it differs because here we 21 must consider the effect of a possible fair use 22 ruling and the other travelers coming along and 23 storing the data in ways that might be somewhat 24 less secure than Google. 25 Q. That makes, in your view, the risk of</p>	<p>1 discussed in Paragraph 36 of your report, would 2 the magnitude of that be similar to the 3 magnitude of a breach at a library? 4 MR. BONI: Object to form. 5 A. Paragraph 36 isn't about libraries. 6 I can consider the question nonetheless. Shall 7 I consider the question? 8 MR. BONI: Why don't you -- 9 Q. If Paragraph 36 isn't about 10 libraries, that clears it up for me. 11 In Paragraph 38 you say, "However 12 remote one may consider the risk of book 13 contents becoming available, that risk must be 14 considered in light of the devastating impact to 15 the class if book contents become available." 16 Here you're comparing the probability of an 17 event to the magnitude of harm in case -- in the 18 case where that event occurs; is that right? 19 A. The sentence discusses both the 20 probability and the magnitude and suggests that 21 in light of the large magnitude, even a small 22 probability should be significant cause for 23 concern. 24 Q. What is the probability of the events 25 discussed in Paragraphs -- Paragraph 37 coming</p>

Page 285

1 to pass in the event of a fair use ruling in
2 favor of Google?

3 MR. BONI: Object to form. You want
4 a mathematical response to that question?

5 MR. GRATZ: Whatever the response the
6 witness has for me.

7 MR. BONI: Object to form.

8 A. I don't know. It would be easier to
9 say once that fair ruling resulted, if it did
10 result, once we see who comes along and scans
11 which books and stores them in what ways, until
12 then, it's just a little bit too speculative for
13 me to want to put a number on it, but it
14 certainly is a serious concern.

15 Q. What's the magnitude of the harm in
16 dollars? The harm here, I mean the harm that
17 you were discussing in Paragraph 38.

18 MR. BONI: Object to form.

19 A. I'm not sure. It's difficult to put
20 a dollar value on it, but I do think it's
21 significant. If you asked a publisher what
22 would they be willing to pay to have a complete
23 protection against piracy, to be able to print
24 their books on uncopyable paper or with magical
25 ink, I think you'd find publishers would be

Page 286

1 willing to pay a significant portion of their
2 enterprise values in order to get that magical
3 technology.

4 Q. And you consider that to be the
5 measure of the magnitude of the harm set forth
6 in Exhibit -- in Paragraph 38?

7 MR. BONI: Object to form.

8 A. It's not that that's how you'd
9 measure it, but that's the sort of thought
10 experiment one would do.

11 Q. How would you measure it?

12 A. On thinking about the way that other
13 large harms are measured, how do we assess the
14 value of a life when a life is taken away from a
15 person? How do we assess the value of a plane
16 crash or a nuclear disaster? It's really not my
17 area of expertise. It's not something I've
18 opined on here. But here I consider the
19 totality of future lost profits. So I do my
20 best to figure out what profits would have been
21 and then what they will be as a result of the
22 loss, and I subtract those two numbers, and that
23 would be the starting point for the harm.

24 Q. Have you done that in preparing your
25 report?

Page 287

1 MR. BONI: Objection. You know he's
2 not a damages expert, Joe.

3 Q. You can answer.

4 A. I have not. I'm not a damages
5 expert.

6 Q. Has a company ever come to you and
7 asked you to evaluate the risk of intrusion into
8 their computer systems which protects books?

9 A. No.

10 Q. Has a company ever come to you and
11 asked you to evaluate the risk of intrusion into
12 their computer systems at all?

13 A. That seems like the kind of thing
14 someone would have asked me to do at some point.
15 I just need to take a moment to think about it.

16 Certainly I've thought about that
17 question for the organizations which -- with
18 which I've had long-term relationships. So, for
19 example, when I was running the Berkman Center
20 server, that was a question I thought about. I
21 thought about it with ICANN. I've thought about
22 it as to portions of Harvard Business School.
23 I've thought about it with Wesley as to the
24 servers that we operate together, as to paying
25 clients that come specifically for that.

Page 288

1 I think it would be unusual for
2 anyone to seek my assistance for that solely and
3 specifically, but if they already knew me from
4 something else, I can think of a couple of
5 clients who have sought assistance with problems
6 generally in that vein based on prior
7 relationships.

8 Q. If a company came to you and asked
9 you to evaluate the risk of intrusion into its
10 computer systems which protect books, would you
11 accept the assignment?

12 MR. BONI: Object to form. That's
13 the entire hypothetical?

14 MR. GRATZ: That's the question.

15 A. I don't think I would be the best
16 person to evaluate their security systems, but I
17 think I would be able to assist them in
18 selecting an appropriate person. I would be
19 able to guide that person towards the areas of
20 greatest concern, perhaps review their initial
21 report, and suggest areas for extension and
22 further inquiry.

23 Q. What process would you recommend be
24 undertaken to evaluate the risk of intrusion
25 into those computer systems that protect books?

72 (Pages 285 to 288)

1 A. I suppose it would all depend on what
2 books I was trying to protect, what I was trying
3 to protect them from, what access I needed to
4 allow. The easiest thing to do to prevent
5 unauthorized access is to prevent all access by
6 destroying the digital records, but I imagine
7 that wouldn't be what someone hired me to tell
8 them. They'd want some way to use it for some
9 purposes while disallowing use for other
10 purposes.

11 Q. If a company came to you and asked
12 you to evaluate the risk of an intrusion into
13 their computer systems which protect books and
14 which host books for the purpose of making
15 snippets available in response to searches, what
16 process would you take to under -- to make that
17 evaluation?

18 A. Well, I think I would -- I would
19 consider the sorts of security systems that
20 we've discussed a couple times today in
21 different parts of our time together as to
22 physical security, network security, software
23 security, application level security, human
24 resources and internal controls. I'd consider
25 each of those. Each would be significant. Each

1 would have multiple facets within it.

2 And then my analysis would be
3 informed, importantly, by the material that I
4 was holding. If it was unique and one of a kind
5 and highly sought after, then I would be
6 particularly concerned about the skills of my
7 intruders. And if I needed to allow massive,
8 high-volume access by a large number of
9 different users, potentially some of them fake
10 or automated or robotic, I would be even more
11 concerned, and I would need to be open to the
12 possibility, the very real possibility that I
13 couldn't do this with the required level of
14 quality and would need to revisit my plans.

15 Q. What information would you need to
16 evaluate the risk of intrusion into such a
17 system which stores books for the purpose of
18 making snippets available in response to
19 searches, for example?

20 A. One would need to think about each of
21 the aspects of security just discussed. So for
22 example, as to human resources security, making
23 sure that there isn't a rogue employee who takes
24 the data in the way that other rogue employees
25 have done other untoward things, including even

1 at Google. I'd look at my organizations's
2 experience or the client's organization's
3 experience with rogue employees.

4 When we have a thousand engineers,
5 how many of them turn out to be bad apples, how
6 many bad ones do you get out of a thousand? Is
7 there any way to prevent two of them from acting
8 together in concert? Could we have an audit
9 trail that prevents this kind of copying and
10 that kind of copying? Is it possible to make an
11 audit trail that's so robust that even a senior
12 engineer can't turn it off? Because we know
13 some of the problems occur from senior engineers
14 who can bypass the ordinary control.

15 So that's the kind of question I'd be
16 asking as to that facet, but to be sure, each of
17 the facets would require a different type of
18 analysis.

19 Q. Did you do any of that in preparing
20 your report in this case?

21 A. I considered those kinds of
22 approaches. The data and information required
23 aren't available to me and weren't necessary in
24 order to reach the conclusions set out in my
25 report.

1 Q. Why weren't they necessary? Would
2 having them have aided you in reaching your
3 conclusions?

4 A. Perhaps I could have reached
5 additional conclusions. I imagine that with
6 enough study, I might get to the point where I
7 was prepared to put a number on some of the
8 probabilities. There's this probability per
9 year of this kind of bad thing happening if you
10 use these controls. I think that is an
11 estimatable number. One can estimate even these
12 very small probabilities with enough analysis
13 and enough review, but it's quite difficult, and
14 I didn't consider it necessary or appropriate,
15 given what I was asked to do in this report at
16 this time.

17 Q. Did you run any bargaining
18 experiments in connection with your report?

19 A. No.

20 Q. Did you perform any statistical
21 analysis in connection with your report?

22 A. No.

23 Q. In signing your own consulting
24 agreements, have you performed market checks
25 regarding terms?

Page 293

1 MR. BONI: Object to form. I don't
2 know what that means. Can you explain that.

3 Q. Mr. Edelman, are you familiar with
4 the term "market checks"?

5 A. I've a general understanding.

6 Q. What is it?

7 A. A market check would be a comparison
8 of a price term or some other term with possible
9 alternatives, benchmarks, competitors, in order
10 to see whether that term is consistent with
11 others that are in other respects similar.

12 Q. Have you done that with respect to
13 your own consulting agreements and your
14 consulting rates?

15 A. In some instances I have.

16 Q. Did you do that in connection with
17 any of the facts or opinions you set forth in
18 your report?

19 A. I'm sorry, I don't understand.

20 MR. BONI: I don't understand it
21 either.

22 Q. Did you review the terms of any
23 agreements -- strike that.

24 In reaching the conclusions set forth
25 in your report, did you perform any market

Page 294

1 checks?

2 MR. BONI: I object to form. I just
3 don't understand the line of questioning.

4 A. I didn't see a basis for comparison
5 to compare the contents of my expert report with
6 three similar expert reports written by others.
7 I didn't see the comparison group.

8 MR. BONI: Not what you're asking.

9 MR. GRATZ: Not what I --

10 Q. Did you do a market check of -- so
11 some of the -- some of the opinions you state,
12 one of the opinions you state in your report is
13 it that certain hypothetical contracts would
14 have certain terms; is that right?

15 A. At least they could if they were
16 subject to negotiation.

17 Q. Or that -- right. Or that certain
18 hypothetical contracts could at least -- at
19 least potentially have certain terms?

20 A. Yes.

21 Q. In determining -- did you form an
22 opinion as to what the likelihood is that either
23 the security term or the liquidated damages term
24 would, in fact, end up being an element of a
25 bargained-for agreement?

Page 295

1 A. I didn't approach it that way.

2 Q. Did you determine the probabilities
3 for either of those terms, that the parties
4 would reach those terms in a negotiation?

5 MR. BONI: What parties? Object to
6 form.

7 Q. The parties to the hypothetical
8 agreement that you hypothesize in Paragraph 9 of
9 your report.

10 A. One thing that I did put a
11 probability on was the chance of any liquidated
12 damages clause becoming available without a
13 contract, and that was zero. So it can only go
14 up from there, and that much was clear to me.

15 As to whether or not it would go up,
16 it seems to me that -- that publishers, if
17 acting together in some way, bargaining
18 collectively, bargaining with Google, with
19 Google in a position of weakness for whatever
20 legal or business reason, it's possible that the
21 publishers would be able to get quite a bit of
22 the ground, particularly if they could use
23 Google's confidence as to the efficacy of its
24 security systems, frankly, to use that against
25 Google.

Page 296

1 If Google is so sure that its
2 security is robust, then it shouldn't have any
3 problem making a guarantee of a thousand dollars
4 per work in the event of a defect, since Google
5 says that will absolutely never happen.

6 Q. Did you assign a probability to the
7 likelihood that that would occur?

8 A. I didn't assign a probability to it.

9 Q. Did you talk to any authors in
10 preparing your report?

11 A. No.

12 Q. Did you talk to any publishers in
13 preparing your report?

14 A. No.

15 Q. Did you talk to any staff members of
16 the Authors Guild in preparing your report?

17 A. No.

18 Q. Did you review the contract governing
19 the Back In Print program in preparing your
20 report?

21 A. No.

22 Q. Did you review any other publishing
23 agreements in preparing your report?

24 MR. BONI: He listed what he
25 reviewed, Joe, Exhibit C.

74 (Pages 293 to 296)

Page 297

Page 299

1 Q. You can answer the question.

2 A. No.

3 Q. Have you ever talked to anyone at
4 Microsoft about its book program?

5 A. Not recently. It would have been a
6 couple of years ago. If I did, I don't really
7 recall it specifically.

8 Q. In preparing your report, did you
9 investigate Google's security for books?

10 A. I don't know what you mean by
11 "investigate" in this context.

12 Q. Did you seek to determine the
13 strength of Google's security for books?

14 A. I checked for secondary sources
15 indicating that others had already bypassed the
16 security. I didn't find sources to that effect.

17 Q. You didn't find any sources
18 indicating that others had bypassed Google's
19 security for books?

20 A. That's right, and that's something I
21 would have wanted to know about, if such sources
22 existed already.

23 Q. Do you possess any Google
24 confidential information regarding its book
25 project?

1 A. In short, my advice to him -- well,
2 he came to me as an attorney.

3 MR. BONI: I was going to ask you
4 that. Were you rendering legal advice?

5 THE WITNESS: I wasn't retained.
6 Nonetheless --

7 MR. BONI: Doesn't matter.

8 THE WITNESS: -- I think we should
9 stop right here.

10 MR. BONI: Yeah, I agree.

11 Q. So it's your testimony that in your
12 discussion with Deepak Malhotra regarding
13 piracy, you were having attorney/client
14 communications with Mr. Malhotra?

15 A. I think I was, yes.

16 Q. Other than Mr. Malhotra, have you
17 discussed piracy with any other authors?

18 A. I know that I have. But I'm having
19 trouble recalling specifically who.

20 Q. Do you remember what you said to
21 them?

22 A. Generally, my advice to individual
23 authors is that it's hard for any individual
24 author to do much about it, so they're probably
25 better off individually focusing their efforts

Page 298

Page 300

1 A. I have specifically indicated that I
2 don't want any such information, and I believe I
3 don't have any.

4 Q. Have you ever tried to pirate a book
5 from Google Book Search?

6 A. I have not.

7 Q. Have you ever advised a -- strike
8 that.

9 Have you ever advised an author
10 regarding piracy?

11 A. I've discussed it with some authors.

12 Q. What was the -- what authors were
13 those?

14 A. Most recently I discussed it with my
15 colleague, Deepak Malhotra.

16 Q. Any others?

17 A. I have discussed it with others. I'm
18 having trouble recalling specifically.

19 Q. What did you discuss with Deepak
20 Malhotra?

21 A. The likelihood of piracy, the extent
22 to which a pirated copy might detract from a
23 ordinary purchased copy, his remedies, if any,
24 as against piracy and those who profit from it.

25 Q. What did you say to him?

1 on writing a great book and selling as many
2 copies as they can to whoever is willing to pay
3 for it.

4 Q. Have you ever advised an author not
5 to post digital contents for fear of piracy?

6 A. In fact, I reached that own -- that
7 conclusion for myself as to the Google case. I
8 declined to post it on my website, even though I
9 have the right to do that. So I advised myself
10 not to do it.

11 Q. And by the "Google case," you mean
12 the case study regarding Google that you wrote
13 for Harvard Business School Press?

14 A. That's what I meant, yes.

15 Q. Why didn't you -- why did you decide
16 not to post it?

17 A. The school would prefer that those
18 cases be purchased directly from the school at
19 the per copy price that you saw. And so even
20 though it is an author's right to post it if the
21 author so chooses, I decided not to for that
22 case.

23 Q. Do you understand the Authors Guild
24 to be advising authors not to post digital
25 content for fear of piracy?

75 (Pages 297 to 300)

Page 301

1 MR. BONI: Object to form.

2 A. I'm not sure.

3 Q. Are any of your articles available
4 for licensing by the Copyright Clearance Center?

5 A. I expect that they are.

6 Q. Have you ever negotiated with the
7 Copyright Clearance Center regarding those
8 issues?

9 MR. BONI: Regarding?

10 Q. Those issues?

11 MR. BONI: What issues?

12 Q. Regarding the availability of your
13 articles for licensing through the Copyright
14 Clearance Center?

15 A. I believe there's a standard form
16 that I filled out when I submitted by Ph.D. to
17 the Harvard Library system, my Ph.D.
18 dissertation. That is a Copyright Clearance
19 Center form, as I call it.

20 Q. Was it a UMI microfilms form?

21 A. This was seven years ago. Perhaps I
22 should refresh my recollection in some other
23 way. It seems perfunctory, and I signed it,
24 although if there were choices to be made, I
25 can't tell you what choice I made.

Page 302

1 MR. BONI: You want to show him
2 something or are you just fishing?

3 MR. GRATZ: Neither.

4 Q. Does the CCC, the Copyright Clearance
5 Center, negotiate security protocols with those
6 who license content from the CCC for posting on
7 the web, for example?

8 A. I don't know.

9 Q. Does the CCC negotiate liquidated
10 damages terms with its licensees?

11 A. I don't know.

12 Q. You've done consulting work apart
13 from your -- the expert engagements that we've
14 discussed; is that right?

15 A. Yes.

16 Q. And some of that consulting work has
17 been for Microsoft; is that right?

18 A. Yes.

19 Q. Overall how much money has Microsoft
20 paid you?

21 A. That's confidential information.

22 Q. Have you ever spoken with anyone at
23 Microsoft about Google?

24 A. Yes.

25 Q. What was said?

Page 303

1 MR. BONI: If there's any
2 confidential relationship or privileged
3 relationship, then you shouldn't answer.

4 A. There are both confidential and
5 privileged issues raised by that question.

6 MR. BONI: If there's anything you
7 can say outside the confines of the privilege,
8 to be fair, you should say that.

9 A. What I've said publicly and what
10 Microsoft has authorized me to say publicly is
11 that I've offered them guidance on a variety of
12 questions. Most of the work focused on things
13 other than Google, actually. Integrity and
14 auditing and advertising fraud and so forth.
15 Routine business matters, from my perspective.

16 Q. But some of the work focused on
17 Google?

18 A. I think I can give you a yes to that
19 without implicating the confidentiality or the
20 privilege, but beyond that, I feel I'm obliged
21 to tread lightly.

22 Q. How much money has Microsoft paid you
23 for your work related to Google?

24 A. I think that's confidential.

25 Q. You were opposing counsel -- strike

Page 304

1 that.

2 You were counsel for the plaintiff's
3 in the Vulcan Gulf case in which the plaintiffs
4 were suing Google; is that right?

5 A. Yes.

6 Q. Did you receive a fee in connection
7 with that litigation?

8 A. I did not.

9 Q. Was that a contingent fee
10 arrangement?

11 A. The agreement with the class
12 representative, the putative class
13 representative, was that the fees would be paid
14 only upon the successful conclusion of the
15 litigation.

16 Q. Did the litigation conclude
17 successful or successfully enough to result in
18 the payment of any money to you?

19 A. Not successfully enough to result in
20 the payment of any money to me.

21 Q. How many blog posts have you written
22 which were critical of Google?

23 A. I'm not sure. I think more than 20.

24 Q. How many blog posts have you written
25 which were supportive of Google?

76 (Pages 301 to 304)

Page 305	Page 307
<p>1 A. More than five.</p> <p>2 Q. Fewer than 20?</p> <p>3 A. I think it's fair to say fewer than</p> <p>4 20.</p> <p>5 Q. Are you familiar with an economist</p> <p>6 named Judith Chevalier?</p> <p>7 A. Yes.</p> <p>8 Q. Who is Judith Chevalier?</p> <p>9 A. She was at the Yale School of</p> <p>10 Management. She's an excellent economist.</p> <p>11 Q. Have you ever cited Judith</p> <p>12 Chevalier's work regarding the economics of the</p> <p>13 market for books?</p> <p>14 A. I have in at least two instances that</p> <p>15 I'm aware.</p> <p>16 Q. In what instances were those?</p> <p>17 A. My undergraduate thesis used a method</p> <p>18 that Ms. Chevalier and Austan Goolsbee developed</p> <p>19 to convert an Amazon sales rank into an</p> <p>20 estimated sales quantity. And so I cited their</p> <p>21 work in the context of that in the graduate</p> <p>22 thesis.</p> <p>23 Then I recently published an article</p> <p>24 about collecting data from the Internet and</p> <p>25 using that data for economic research, and I</p>	<p>1 Goolsbee, the first author on that paper.</p> <p>2 Q. Turning to page 3 of the thesis, you</p> <p>3 cite the Goolsbee and Chevalier paper in the</p> <p>4 center of that page; is that right?</p> <p>5 A. Yes.</p> <p>6 Q. Turning to page 8 of the thesis, you</p> <p>7 cite the Goolsbee and Chevalier paper in the</p> <p>8 last line of that page; is that right?</p> <p>9 A. Yes.</p> <p>10 Q. And it's also cited on the following</p> <p>11 page in the second to last line; is that right?</p> <p>12 A. Yes.</p> <p>13 Q. As well as in the middle of the page?</p> <p>14 A. So it is.</p> <p>15 Q. Turning to page 31, you cite the</p> <p>16 Goolsbee and Chevalier paper at the beginning of</p> <p>17 the page?</p> <p>18 A. I do.</p> <p>19 Q. And then turning to page 70, you cite</p> <p>20 the Goolsbee and Chevalier paper in the center</p> <p>21 of the page in the middle of the line; is that</p> <p>22 right?</p> <p>23 A. Yes.</p> <p>24 Q. What is your opinion of Judith</p> <p>25 Chevalier's expertise regarding economics?</p>
Page 306	Page 308
<p>1 cited that same article again for substantially</p> <p>2 the same purpose.</p> <p>3 Q. And you cited Ms. Chevalier's work</p> <p>4 multiple times in your thesis; is that right?</p> <p>5 A. I should think I cited it multiple</p> <p>6 times, yes.</p> <p>7 Q. How about six times; is that right?</p> <p>8 MR. BONI: But who's counting?</p> <p>9 A. I don't know. I haven't read that</p> <p>10 often, recently.</p> <p>11 MR. GRATZ: Let's mark as Exhibit 20</p> <p>12 this document.</p> <p>13 (Document marked as Exhibit No. 20 for</p> <p>14 identification.)</p> <p>15 Q. Mr. Edelman, is this your</p> <p>16 undergraduate senior thesis?</p> <p>17 A. Well, it seems to be. It's not so</p> <p>18 easy to get. Usually, people have to ask me for</p> <p>19 it, so I'm intrigued you managed to find it</p> <p>20 without asking me for it. But it seems to be</p> <p>21 what it purports to be.</p> <p>22 Q. This is the document in which you</p> <p>23 cited Ms. Chevalier's work?</p> <p>24 A. I think so. Let's check the</p> <p>25 references section. Cited under "G" for</p>	<p>1 A. Well, I just loved this paper and</p> <p>2 found it very clever. She's been quite</p> <p>3 prolific, and I really haven't read the majority</p> <p>4 of her work. I look forward to taking the time</p> <p>5 to do that sometime soon I hope. But beyond</p> <p>6 that, she's very well-published in top journals,</p> <p>7 which means that the prevailing view among her</p> <p>8 peer reviewers is that her work is quite good.</p> <p>9 Q. What is your opinion of Judith</p> <p>10 Chevalier's expertise regarding the economics of</p> <p>11 the market for books?</p> <p>12 MR. BONI: Object to form.</p> <p>13 Q. What is your opinion of Judith</p> <p>14 Chevalier's expertise regarding the economics of</p> <p>15 the market for books?</p> <p>16 MR. BONI: Object to form.</p> <p>17 A. I'm not sure. I haven't read her</p> <p>18 opinions on that in general. I know the</p> <p>19 findings that are in the Goolsbee and Chevalier</p> <p>20 2001 paper. As to her other conclusions, I'd</p> <p>21 need to review both the conclusions and the</p> <p>22 methodologies to see what I think.</p> <p>23 Q. Are you familiar with a man by the</p> <p>24 name of Albert Greco?</p> <p>25 A. I don't think so.</p>

Page 309

1 Q. Turning to the references cited page
2 of your senior thesis on page 77, under G, do
3 you see a citation to a book by A. Greco called
4 The Book Publishing Industry?

5 A. Yes.

6 Q. And turning to page 33 of your senior
7 thesis, you see the bottom of page 33 it says,
8 "I further add two promotion-specific variables
9 to investigate market trends noted by Greco
10 (1997) in discussing clumping of book sales over
11 time"?

12 A. Yes.

13 Q. Is that a citation to the Greco work
14 titled The Book Publishing Industry cited in
15 your references cited section?

16 A. Seems to be.

17 Q. Do you have an opinion as to Albert
18 Greco's expertise regarding The Book Publishing
19 Industry?

20 A. Not really.

21 MR. BONI: Are you done with this,
22 Joe?

23 MR. GRATZ: Yes. Nothing further.

24 MR. BONI: I have nothing.

25 THE VIDEOGRAPHER: Here ends this

Page 310

1 deposition. Off the record, 6:18 p.m.
2 (Whereupon, the deposition was
3 concluded at 6:18 p.m.)
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Page 311

1 CERTIFICATE
2 COMMONWEALTH OF MASSACHUSETTS.
3 MIDDLESEX, SS.

4 I, Avis Barber, Registered Professional
5 Reporter and Notary Public, in and for the
6 Commonwealth of Massachusetts, do hereby certify
7 that:

8 BENJAMIN G. EDELMAN, the witness whose
9 deposition is hereinbefore set forth, was duly
10 sworn by me, that I saw a picture identification
11 for him in the form of his Harvard College
12 Identification card, and that the foregoing
13 transcript is a true and accurate transcription
14 of my stenotype notes to the best of my
15 knowledge, skill and ability.

16 I further certify that I am not related to
17 any of the parties in this matter by blood or
18 marriage and that I am in no way interested in
19 the outcome of this matter.

20 IN WITNESS WHEREOF, I have hereunto set my
21 hand and notarial seal this 20th day of June
22 2012.

23 _____
24 Avis Barber, RPR
25 Notary Public
My commission expires: July 30, 2015

Page 312

1 I declare under penalty of perjury
2 under the laws that the foregoing is
3 true and correct.
4

5 Executed on _____, 20____,
6 at _____, _____.

7
8
9
10
11
12 _____
13 BENJAMIN G. EDELMAN
14
15
16
17
18
19
20
21
22
23
24
25

78 (Pages 309 to 312)